Study of the Nutrition Services Department for Seattle Public Schools

April 2016

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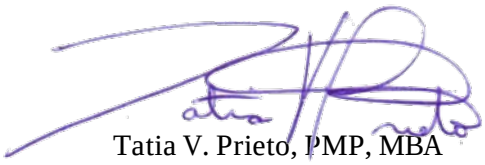
Pegi McEvoy
Assistant Superintendent of Operations
Seattle Public Schools
2445 3rd Avenue South
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Ms. McEvoy,

Enclosed is our final report for the study of the Nutrition Services Department. This study was performed in accordance with our proposed work plan and district guidelines. It contains recommendations for correcting three findings, as well as recommendations to improve operations, policies, and procedures in 27 areas where the team identified management issues. As to the overall question with which we began this study, no, we do not believe that outsourcing of nutrition services is needed or warranted.

This study could not have been completed as deeply or as quickly without the tremendous assistance of various district staff, particularly that of the Interim Director, Teresa Fields. We also appreciate the cooperation of all district stakeholders in supporting this study and its greater goal of improving school meals for Seattle students.

Sincerely,



Tatia V. Prieto, PMP, MBA
President

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Executive Summary

In March 2016, Seattle Public Schools (SPS) contracted with Prismatic Services, Inc., to provide the district with consulting services for its Nutrition Services (NS) Department. As detailed in the district's Request for Proposals and Prismatic's proposal, the primary objectives of the study were:

- review and analyze management structure and service delivery model in light of increasing enrollment and declining participation rates;
- review best practices and current organizational structure related to roles and responsibilities, efficiency and effectiveness of service delivery, career ladder structures and professional development;
- review current menu, supply chain, and production schedules with focus on creating a climate of customer service and satisfaction, increasing participation rates, and utilizing capital equipment investments; and
- review and analyze current inventory of kitchen equipment and provide recommendations on equipment purchase and/or replacement based on the district's current service model, accommodation of changes to menus to improve customer satisfaction and participation, and improve safety conditions.

This report is provided in fulfillment of Prismatic's contract.

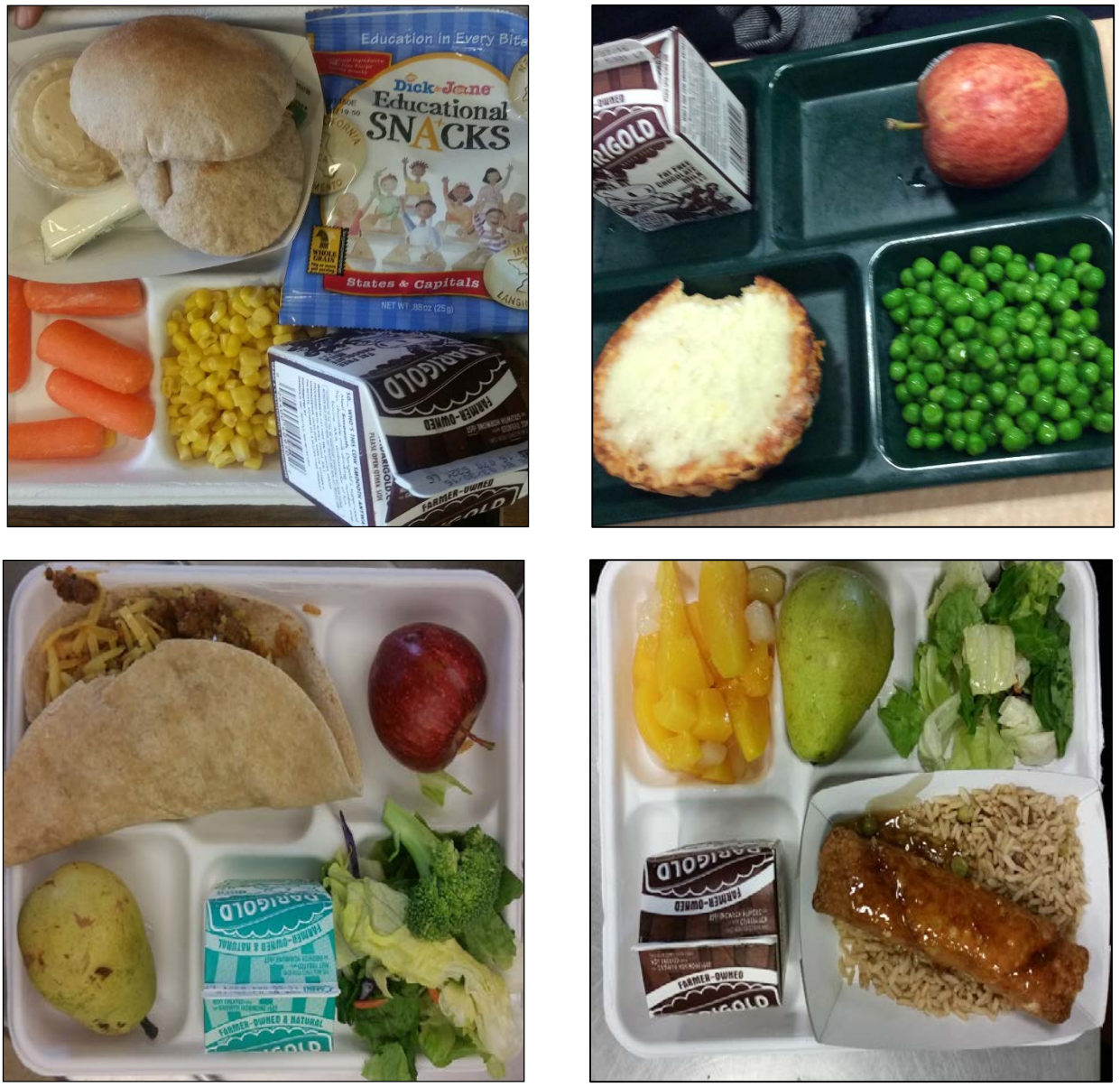
Background

School meal programs began with the *National School Lunch Act of 1946*, which authorized the National School Lunch Program (NSLP) to "safeguard the health and well-being of the nation's children". The *Child Nutrition Act of 1966* established the School Breakfast Program (SBP). Seattle participates in the NSLP, the SBP, afterschool snack, and the Child Nutrition Commodity Program. Districts that participate in these federal programs receive cash subsidies and donated commodities from the USDA for each eligible meal they serve. In return, the district must serve meals that meet federal guidelines for nutritional values, and it must offer free or reduced-price meals to eligible students.

Students in the lowest socioeconomic bracket qualify for free meals, while others qualify for reduced-price meals. All meals served according to federal guidelines receive some level of reimbursement, including those served to students who pay full price. School districts do not receive federal reimbursement support for teacher or guest meals. The *Healthy Hunger-free Kids Act of 2010* (*HHFKA*) provides an additional six cents reimbursement per lunch to school districts that are certified as compliant with the new meal patterns.

Exhibit 1 provides a sampling of school meals served by SPS schools in March 2016. **Exhibit 2** provides a sampling of fresh salad and sandwich options prepared by the central kitchen and available in SPS schools in March 2016.

Exhibit 1
Sampling of SPS Student Lunch Trays, March 2016



Source: Prismatic, March 2016

Exhibit 2
Central Kitchen Prepared Meal Options

Sandwich Meal



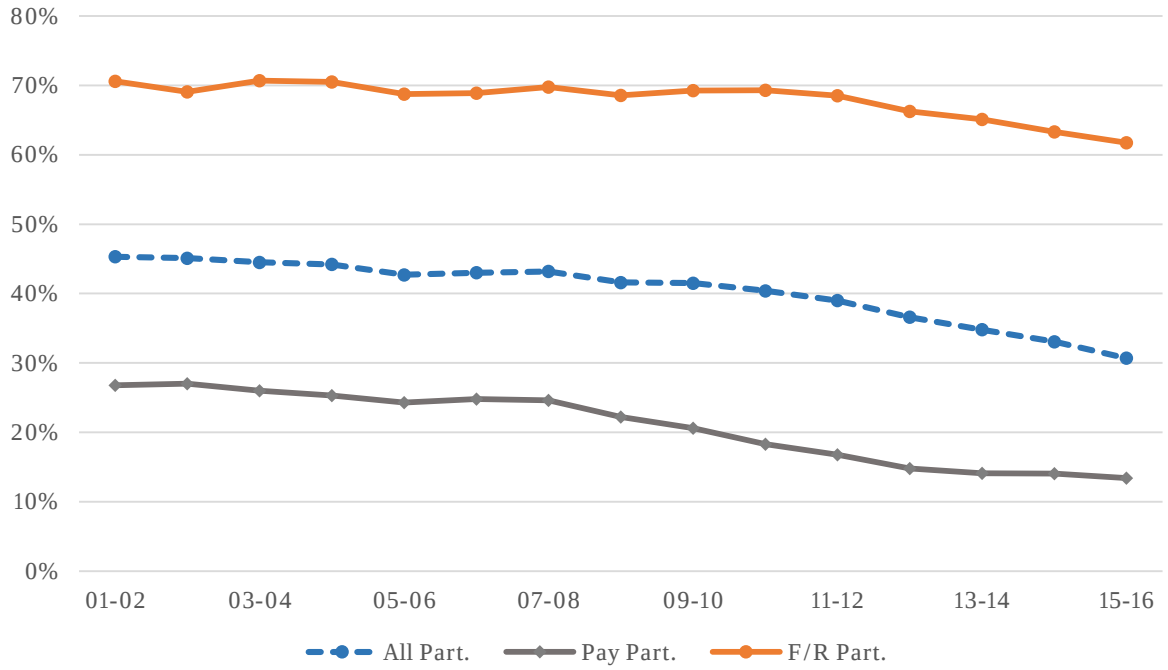
Salad Meal



Source: Prismatic, March 2016

As district enrollment has grown from 45,000 in 2001-02 to nearly 53,000 in 2015-16, the number of students who qualify for free or reduced-price meals has remained steadier, ranging between 18,000 and 21,000. **Exhibit 3** shows the trend in lunch participation overall, and for full-pay versus free/reduced-price students. Overall participation was 45 percent in 2001-02, 2002-03, and 2003-04, but has been slowly declining since then. Full-pay and free/reduced participation followed a similar trend. The drop-off in full-pay participation has been steeper, from a high of 27 percent in 2001-02 to a low of 13 percent for 2015-16, a decline of 14 percentage points. Free/reduced participation has declined by nine percentage points over the same time period.

Exhibit 3
Trend in Student Lunch Participation



Source: SPS, March 2016

Methodology

Prismatic's work plan for this project encompassed six tasks:

1. Initiate project.
2. Collect and review program data.
3. Review survey data already collected.
4. Complete fieldwork.
5. Develop draft report.
6. Prepare final report and close project.

Prismatic provided a team of four consultants along with clerical and technical staff. The project manager completed an advance visit to the district March 3-4, 2016. The full team completed fieldwork March 14-25, 2016. In total, the team completed 30 individual interviews. At the school level, the consulting team conducted six focus groups, three with cafeteria managers and three with cafeteria employees. The consulting team also met with school-based cafeteria staff as part of breakfast and lunch observations. Some students were interviewed anecdotally as part of breakfast and lunch observations. Outside SPS, the consulting team contacted various other student nutrition persons as resources in developing this report, including representatives of the Office of the Superintendent of Public Instruction (OSPI). The consulting team also completed a focus group with three parents of SPS students.

All members of the consulting team visited the NS central kitchen and warehouse to assess operations. Team members also visited a total of 32 schools to observe meal preparation, serving line operations, adequacy of space and equipment, and use of staffing. Some schools

were visited more than once. For most schools, the consulting team completed an observation using a standardized rubric so that comparisons among schools could be made.

Commendable Areas

Prismatic found two areas of the NS operation to be commendable:

- **NS and Local 609 recognize the value of professional membership and training and the SNA certification program.** Hourly salary rate increases are given to those employees who provide proof of SNA certification. When being considered for promotion, one of the criteria given additional points is whether the employee has become certified with SNA.

- **A self-serve salad bar is available in all Seattle Public Schools.** Every school has a daily salad bar from which students can select side items for themselves. **Exhibit 4** shows a salad bar in Maple Elementary School. Typical of many of the salad bars the consulting team observed, the Maple salad bar offers a variety of fresh fruit and vegetable items. Sometimes a canned item is included, sometimes a thawed frozen item. In many cases, the consulting team observed SPS students eager to select something from the salad bar and doing so without prompting by cafeteria staff.

Exhibit 4
Sample Seattle Salad Bar – Maple Elementary School



Source: Prismatic, March 2016

The Institute of Medicine's 2015 Recommended Dietary Guidelines for Americans noted that nutrients essential for growth, development and health and found in vegetables and fruits continue to be under-consumed by young people. The current meal patterns for school breakfast and lunch under the *Healthy, Hunger-free Kids Act of 2010* specify that a serving of either fruit, vegetable, or a combination of fruit and vegetable be selected with each meal. The quantity is dependent on age and

grade. The guidelines require that variety of vegetables from vegetable subgroups be offered and that selection of these components are to be encouraged.

Findings

In this report, findings are areas, policies, or practices where the district is out of compliance with applicable regulations. Prismatic made three findings in the NS operation:

- **The indirect costs charged to the NS program are excessive.** Instead of a true indirect cost allocation methodology, each year the district applies the maximum rate allowed by the state; for 2015-16 that rate is 16.71 percent. The district lacks an accounting rationale for this transfer amount.

  According to USDA documentation, school meal programs may be charged indirect costs. To do so, indirect costs must be "reasonable, necessary, and allocable." To charge a cost as indirect to a school meal program, an indirect cost must be "adequately documented." According to SPS staff, the use of the maximum allowable indirect cost rate has been adopted for use with the NS program by default. There has been no recent discussion as to whether the rate is appropriate.

- **Training for CN staff could be improved and brought into compliance with USDA requirements.** The NS department provides its employees with training opportunities, but several factors are contributing to an ineffectual training program. Moreover, the department is not meeting the requirements of the USDA Professional Standards, one of the components of the *Healthy Hunger-Free Kids Act* (*HHFKA*).

  In 2010, as part of *HHFKA*, the USDA included requirements for Professional Standards that became effective July 2015. There are minimum training hours required for each employee group. The training must be job-specific, apply to the employee's work duties, and assist them in optimal performance of their assigned job duties. The regulation requires documentation to demonstrate compliance with the training requirements. Records must be available for state agency review and are now part of the Administrative Review. Training records must be kept for three years plus the current school year.

- **Current procurement practices have resulted in a lack of effectiveness and adherence to regulations.** SPS is not adhering to the updated USDA procurement rules for child nutrition programs that became effective October, 2015. Extensions of previous procurements may not result in the best quality products and services at the best prices for the program and are out of compliance with the new rules. The new procurement rules also become part of the OSPI-conducted USDA Administrative Review in 2016.

  Procurement was previously handled by a procurement specialist on the NS central office staff. The position was eliminated due to budget cuts. Procurement responsibilities were shifted to the operations manager position that is currently unfilled. Procurements are being handled by central office staff members who are trying hard to keep this critical function afloat but who have limited knowledge regarding child nutrition procurement.

The new USDA procurement rules for child nutrition programs are found in 2 CFR Part 200. USDA Policy Memo SP 02-2016, CACFP 02-2016, SNSP 02-2016 contains an overview and questions and answers regarding the new rules. The updated guidelines were effective October, 2015. The new procurement requirements for child nutrition programs become part of the USDA/State Agency Administrative Review beginning in 2016. A written Code of Conduct, a written procurement plan, and inclusion in bids of pre-approved equal products are required. These do not appear in current SPS child nutrition procurements.

Management Issues

In this report management issues are areas, policies, or practices where the district is in compliance with applicable regulations, but falling short of best practice, industry standards, or comparable peer districts. Most of the management issues of this report were developed with the overarching goal of improving student participation in school meals programs. Prismatic developed 27 management issues, in the areas of participation; staffing; menus, production, and procurement; and equipment. The management issues found by the consulting team were:

- **The NS department is essentially a $13 million enterprise, but it is functioning without sufficient timely financial information.** NS department leaders are operating the program without data to analyze commonly used metrics in school food programs, while cafeteria managers lack knowledge of whether their operations are profitable. The district does compile monthly data by campus in a number of critical areas. NS department leaders are currently managing the program without sufficient attention to the bottom line. This is primarily due to vacancies in a number of key positions, but it is nevertheless negatively impacting the financial performance of the program.

- **The district is not using the available Community Eligibility Provision (CEP) for all eligible schools.** This is likely negatively impacting meal participation at those 20 elementary schools. The SPS schools that have implemented CEP have shown steady lunch participation, in comparison to declines in other comparable SPS schools.

- **The NS department does not control the length of lunch periods at individual high schools.** Instead, the district relies on historical practice and the decisions of principals as to the length of lunch periods and the number of students who must be served during that period. This ineffective practice has severely impacted service quality of school meals at the high schools. The consulting team found that SPS high schools:

  - do not schedule enough lunch periods for all free/reduced-price students to be served a meal - the average serving period is just 32.5 minutes, despite an average of 737 students per serving period;

  - do not provide sufficient facilities to handle high capacity meal periods – only three of the eight high schools observed had adequate seating for just the number of students eligible for free/reduced lunch each lunch period; and

  - make little effort to accommodate lunching students elsewhere on campus – seating in outdoor areas is not provided; students eat sitting on hallway floors.

As a result, high school lunch participation is low. For 2015-16 through January, it was just 18.9 percent. Given that 38.2 percent of the district's high school students qualify for free or reduced-price meals, its high school lunch participation should be much higher. For low income students the lack of true access to school lunch meals means they either go without needed nutrition or spend money they can ill afford on food items obtained off campus.

- **Almost no elementary students have at least 20 minutes to eat lunch.** This is contrary to best practices, the national trend, and district policy. Most elementary lunch periods are 20 minutes in total length even though district policy states that students will be provided with "20 minutes to eat lunch with additional time as appropriate for standing in line". When lunch periods are a total of 20 minutes in length it is not possible for the school to meet this requirement. In 12 elementary cafeteria observations, the consulting team measured an average of 4.3 minutes for the last child in the serving line to select a meal and pay for it. At one school, the consulting team recorded a maximum line wait time of eight minutes.

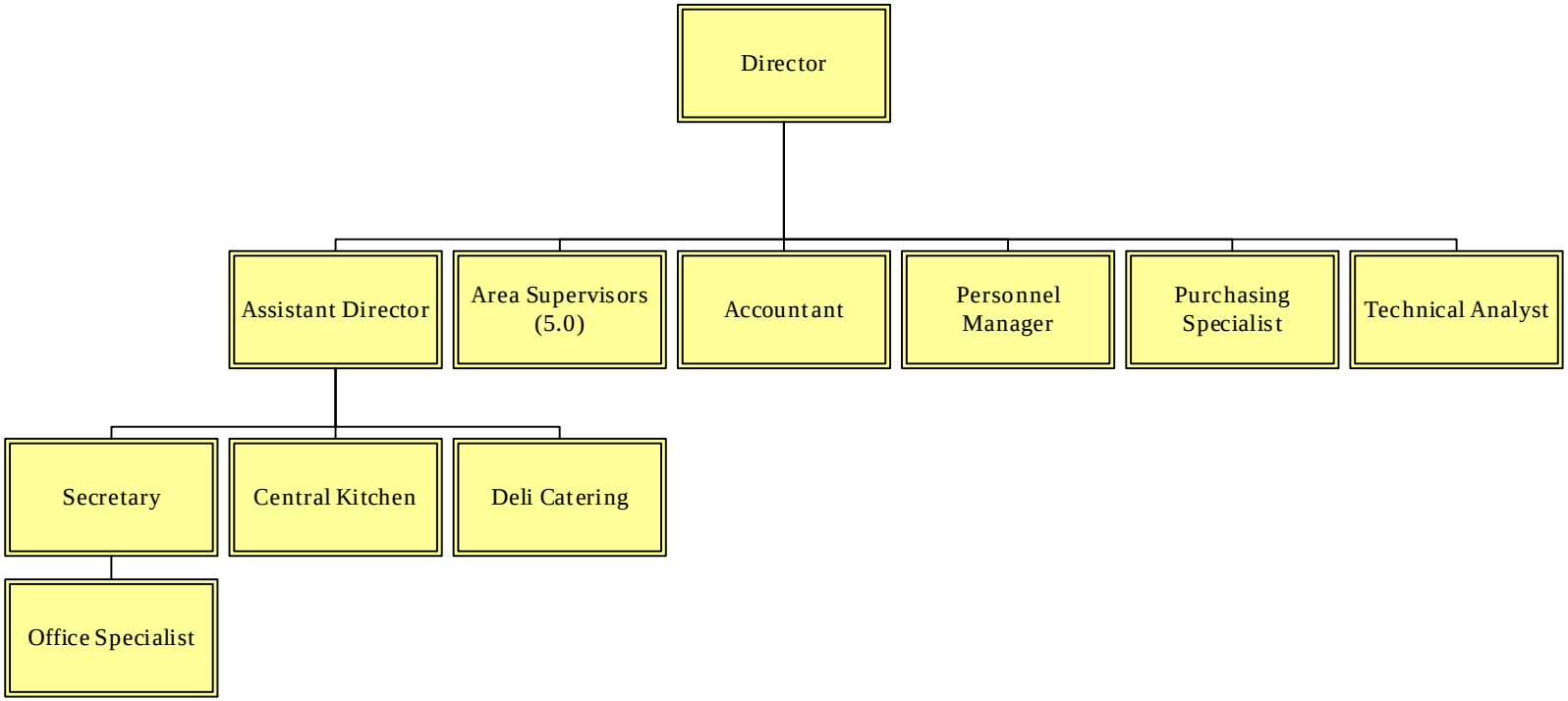
- **Not all elementary students have recess before lunch.** This is contrary to best practices. Several studies have found improved meal participation and healthier eating when students are given recess prior to lunch each day. The district currently encourages recess before lunch but does not require it by policy.

- **The efficiency and effectiveness of the NS central office could be improved with reorganization.** There are several factors contributing to the central office not performing at an optimal level:

  - Central office vacancies are not being posted and filled in a timely manner.
  - There is limited financial data analysis of the program at the central level or at the school level.
  - Many purchasing functions are performed outside the department.
  - The NS supervisors are currently contracted to work only 223 days per year.
  - The span of control for the area supervisors is too large. In addition to directly supervising a number of schools (ranging from 20 to 25), each is also responsible for any number of additional duties. Best practice staffing guidelines recommend one supervisor for every 20 schools. Staffing according to this guide would result in increasing area supervisors by one position. Best practices in staffing also call for an assistant director position.
  - In the central kitchen, while the spans of control are adequate, the management structure is not. The central kitchen manager is a part of the Local 609, rather than occupying a management position.
  - In comparison to peers, SPS has staffed its NS department more lightly.

Exhibit 5 shows revised organizational chart for the central office recommended by the consulting team.

Exhibit 5
Recommended NS Central Office Organization Chart



Source: Prismatic, March 2016

- **There is limited supervision and monitoring of kitchen operations.** The area supervisors are not meeting the expectation of spending 80 percent of their time supervising schools, due to several factors. In school visits, the consulting team found several instances of inconsistent application of standards in production and serving. These examples of inconsistency and a lack of adherence to standard procedures for preparation and serving are indicative of infrequent monitoring and oversight.

- **The employee evaluation process is not effective at identifying and disciplining poor performers.** As a result, some staff do not take the performance appraisal process seriously and managers and area supervisors are reluctant to identify performance issues that should be addressed. Poor performing employees are not receiving the feedback and assistance they need to improve their performance and skills.

- **The district is not allocating labor hours based on industry best practices.** The district is using its own formulas for determining meal equivalents (ME) and for determining subsequent cafeteria productivity, measured through meals per labor hour (MPLH). The district's ME formula is not the one recommended by the Office of Superintendent of Public Instruction (OSPI), which recommends the standards as developed by the Institute for Child Nutrition (ICN). The district is not using established industry best practice guidelines for calculating MPLH. Finally, the district is not using a range of acceptable MPLHs for a given number of MEs, which is also recommended as an industry best practice.

  Adjusting both the MPLH standards to the ones recommended by the industry and the calculation of meal equivalents to those recommended by OSPI and the industry would update the management methodology of the district and allow for apples-to-apples comparisons with peer districts using the same methodology. The effect of using industry standards for ME and MPLH calculations shows that, for the first half of 2015-16, most SPS schools are underproductive, 23 are within industry standards, and 20 are overproductive.

- **SPS Nutrition Service does not maintain an adequate pool of substitute workers to cover cafeteria staff absences.** As a result, area supervisors spend the majority of their time working as a substitute in their kitchens. The current pool of on-call substitutes, who are part-time employees, and float workers, who are full-time employees is insufficient to cover all the districts needs due to cafeteria staff absences.

- **No goals exist for staffing at the central kitchen and there is no labor allocation process for the central kitchen.** The central kitchen has an operations manager, two coordinators, five leads, and 17 assistants. Combined, they work 173.5 hours daily. Industry best practice guidelines for staffing a central kitchen like the one SPS has calls for only 150 daily labor hours.

- **Planned menus do not meet identified menu planning best practices, leading to decreased customer satisfaction and participation.** While planned menus meet the current USDA meal pattern guidelines, the menu planning process is not fully addressing school nutrition industry best practice indicators.

- **Pre-pack hot entrée and side components limit menu variety options and do not optimize the flavor, freshness, or eye appeal of the meals.** Pre-pack

entrées are portioned into special coated paper pre-pack containers and sealed with a film wrap at the central kitchen then shipped to 16 elementary school locations and heated on-site. The packaging does not highlight the entrées, especially those that are prepared from fresh scratch or speed scratch ingredients.

- **Kitchen capacity and equipment in secondary kitchens is not being utilized to prepare popular food items onsite, decreasing customer satisfaction and participation.** The district secondary schools, with the exception of NOVA High School, do not prepare entrée and side items onsite, using standardized recipes. Entrée items are primarily heat and serve convenience foods. Prior to building the central kitchen, secondary kitchens prepared items such as soups, sauces, pasta, mashed potatoes, and baked rolls onsite.

- **Customers do not have all menu choices available to them at each lunch period and/or toward or at the end of the serving line.** Kitchen staff at elementary and secondary sites do not order and/or prepare enough of each menu item for customers to select their favorite daily meal choice. Ultimately, this reduces meal participation as students learn not to rely on the menu and to instead seek other alternatives.

- **The district's salad bar options are repetitious, limiting vegetable and fruit options.** Across SPS schools, salad bar options are also inconsistent, based on manager choice, rather than student selection data or accurate production records. There were also problems with preparation and presentation of salad bar items.

- **Secondary meal options lack creativity and neither reflect a variety of current menu trends, nor the variety that customers find off campus.** A review of SPS secondary menus and onsite observations at district middle and high schools found that the majority of food items offered daily at both breakfast and lunch are heat and serve convenience foods.

  Vegetarian meal options are limited. The consulting team's menu review found that some entrée meat items could be declined and a vegetarian meal would result, but it is not clearly presented to students and parents. Protein options are not offered on the salad bar so that students can compose reimbursable meals entirely from the salad bar.

- **Elementary menus do not offer a salad, sandwich, or yogurt parfait meal daily, limiting what are typically popular student choices.** This likely negatively impacts elementary lunch participation. With the exception of two items that are offered one day a week, SPS elementary schools only offer two hot entrees each day. No protein items are offered on the salad bar, so a student cannot select a reimbursable meal solely from that area.

- **At SPS secondary schools, serving line configurations, single POS stations, crowded dining rooms, and the anticipation of long wait times discourage participation.** Instead, students were observed bringing their own lunches at both middle and high schools, or, at high schools, going off campus for lunch. As a result, lunch participation among the district's free/reduced students is substantially worse than in peer districts.

- **Current lack of a food inventory management system for the central kitchen and school sites has resulted in inaccurate usage data for forecasting; products being unavailable when needed; and district resources tied up in excess school inventories.** The NS department is not adhering to best practices in inventory management and tracking at the central warehouse and the school sites. Food items needed for specific menus are not always available in the warehouse, freezer, or cooler when needed. This appears to be due to poor inventory management and forecasting using inaccurate data. There are no Par levels established for food, either in the warehouse and central kitchen or at the schools. The schools do not do a monthly inventory.

- **The district lacks an equipment replacement plan.** Outdated, inoperable, and inadequate equipment is negatively impacting production and productivity. In school observations, the consulting team found old equipment that is in need of repair or surplus discard. Of the 33 sites visited, the consulting team found 10 kitchens that did not have adequate equipment to prepare quality meals or provide for efficient meal service. Some specific examples of broken or non-functioning equipment are shown in **Exhibit 6**.

Exhibit 6
Examples of Broken or Non-functioning Equipment

Old Oven Being Used for Hot Holding at Lowell Elementary



Broken Door Brace on Steamer at Ranier Beach High



Source: Prismatic, March 2016

- **The district lacks equipment and supplies to maintain temperatures on the serving line.** Staff has difficulty keeping hot foods hot and cold foods cold throughout the serving period. Compounding this problem, serving areas are not configured to support healthy eating choices.

  In several schools visited, the consulting team observed serving lines without the equipment necessary to keep hot foods hot and cold foods cold. In several cases, it appeared that food safety might be in question. **Exhibit 7** shows a selection of

serving lines in the SPS schools. As shown, many are barebones and cannot be made attractive to standards observed in other school districts.

Exhibit 7
Examples of Poor SPS Serving Lines



Source: Prismatic, March 2016

- **Although NS maintains an inventory of equipment in the schools, it could be improved.** Data provided to the consulting team indicates equipment condition is not maintained accurately. The district has 133 pieces of equipment older than 50 years; of these, 53 pieces are noted as being in "excellent" or "new" condition.

- **The district does not maintain and repair kitchen equipment in a timely manner.** As a result, staff has to make menu changes, determine work-around strategies, or use more labor hours to get the work done. Of the 33 sites visited, the consulting team found that 13 kitchens had equipment in need of repair. In focus groups and conversations, cafeteria staff noted the inefficiency of the current work order reporting process, lack of communication between SPS maintenance staff and NS staff, and the need for repeated repairs to the same piece of equipment.

- **There are computerized systems in use in the NS department; however, they do not meet the needs of the program and they are not linked together to provide comprehensive data to decision makers in a timely manner.** Currently, the department uses different software programs for point-of-sale, ordering, and inventory, free/reduced processing, and financial management. These are not all interfaced, and they are not all web-based to give real time information to the decision makers.

- **In general, school cafeterias have inadequate line signage to encourage meal participation.** The district is not fully using the Nutrislice™ software it has. The primary method used to advertise the menu consists of paper copies of the menu taped to the serving line door or a handwritten notice on a board. For younger students, the menus is often posted too high for them to be able to read. For all

students, the printout is too small to easily read while moving through the serving line. On the serving lines themselves, food signage is often placed above the height of younger students. Sometimes the signage incorrectly identifies items.

- **The district lacks an ordering system for smallwares**. Smallwares include serving utensils, thermometers, timers, etc. The consulting team observed a manager trying to check beef for doneness using a thermometer that may or may not have been accurate. There was no other thermometer in the kitchen to use as a backup. Cafeteria staff noted that obtaining smallwares is a problematic process.

Exhibit 8
Recommendations With Estimated Costs and Savings

	Recommendation	Estimated (Costs) or Savings					Total Five-Year (Costs) or Savings
		2016-17	2017-18	2018-19	2019-20	2020-21	
Chapter 2	**Participation**						
F1	Charge the NS program with a reasonable indirect cost rate.	$0	$0	$0	$0	$0	$0
1	Improve the financial operations for the NS program by focusing on selected metrics in a dashboard.	$0	$0	$0	$0	$0	$0
2	Implement CEP in the next 20 schools.	$0	$0	$0	$0	$0	$0
3	Adjust the high school meal program to accommodate the adjusted school bell times by eliminating second breakfast and adding those minutes to the lunch periods.	$0	$0	$0	$0	$0	$0
4	Provide all elementary students with a minimum of 20 minutes to eat lunch.	$0	$0	$0	$0	$0	$0
5	Require recess before lunch for all elementary students.	$0	$0	$0	$0	$0	$0
	Subtotal	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Chapter 3	**Staffing**						
F2	Improve the effectiveness of staff training.	$0	$0	$0	$0	$0	$0
6	Reorganize the central office.	($117,292)	($117,292)	($117,292)	($117,292)	($117,292)	($586,460)
7	Improve the monitoring and oversight of the schools by the area supervisors.	$0	$0	$0	$0	$0	$0
8	Improve the employee evaluation process so that poor performers can be identified and disciplined.	$0	$0	$0	$0	$0	$0
9	Adjust the school kitchen labor allocation process.	$0	$0	$0	$0	$0	$0
10	Ensure an adequate pool of substitutes.	$0	$0	$0	$0	$0	$0

	Recommendation	Estimated (Costs) or Savings					Total Five-Year (Costs) or Savings
		2016-17	2017-18	2018-19	2019-20	2020-21	
11	Staff the central kitchens according to industry guidelines. The consulting team believes there will be a cost savings if this is implemented.	$0	$0	$0	$0	$0	$0
	Subtotal	**($117,292)**	**($117,292)**	**($117,292)**	**($117,292)**	**($117,292)**	**($586,460)**
Chapter 4	**Menus and Production**						
F3	Update child nutrition procurement to meet USDA rules and to meet food and supply quality expectations of customers.	$0	$0	$0	$0	$0	$0
12	Implement best practices in menu planning.	$0	$0	$0	$0	$0	
13	Convert all pre-pack sites to bulk in the next two years.	$20,695	$41,391	$41,391	$41,391	$41,391	$186,259
14	Resume onsite preparation in high schools and middle schools, retaining some bulk preparation in the central kitchen.	$56,135	$113,970	$170,103	$170,103	$170,103	$680,414
15	Require all schools to have available all menu options for the last student in line each serving period.	$0	$0	$0	$0	$0	$0
16	Improve salad bar standardization.	$0	$0	$0	$0	$0	$0
17	Expand menu offerings to include self-serve food bars in secondary schools.	$0	$0	$0	$0	$0	$0
18	Add a consistent salad, sandwich, yogurt parfait entrée in elementary schools, eliminating the second hot entrée.	$44,070	$89,475	$133,545	$133,545	$133,545	$534,180
19	Expand serving options to include grab-and-go carts and reimbursable vending machines.	($600,000)	$1,540,782	$1,540,782	$1,540,782	$1,540,782	$5,563,128

	Recommendation	Estimated (Costs) or Savings					Total Five-Year (Costs) or Savings
		2016-17	2017-18	2018-19	2019-20	2020-21	
20	Develop and maintain an inventory management and tracking system for the central kitchen and school sites.	$0	$0	$0	$0	$0	$0
	Subtotal	**($479,100)**	**$1,785,618**	**$1,885,821**	**$1,885,821**	**$1,885,821**	**$6,963,981**
Chapter 5	**Equipment**						
21	Budget one percent annually for equipment replacement and for new equipment as needed.	($135,000)	($135,000)	($135,000)	($135,000)	($135,000)	($675,000)
22	Improve serving line equipment.	($100,000)	($100,000)	($100,000)	($100,000)	($100,000)	($500,000)
23	Develop a complete equipment inventory that includes condition status.	$0	$0	$0	$0	$0	$0
24	Develop an alternative source for equipment maintenance and repair.	$0	$0	$0	$0	$0	$0
25	Purchase one software program that is comprehensive and web-based so that real time data are available to school staff and central office staff for efficiency and analysis.	($432,000)	($20,000)	($20,000)	($20,000)	($20,000)	($512,000)
26	Improve cafeteria menu and signage.	$0	$0	$0	$0	$0	$0
27	Create a process for managers to order smallwares from the central warehouse.	$0	$0	$0	$0	$0	$0
	Subtotal	**($667,000)**	**($255,000)**	**($255,000)**	**($255,000)**	**($255,000)**	**($1,687,000)**
	Total savings	**$120,900**	**$1,785,618**	**$1,885,821**	**$1,885,821**	**$1,885,821**	**$6,963,981**
	Total costs	**($1,384,292)**	**($372,292)**	**($372,292)**	**($372,292)**	**($372,292)**	**($2,273,460)**
	Total net savings and costs	**($1,263,392)**	**$1,413,326**	**$1,513,529**	**$1,513,529**	**$1,513,529**	**$4,690,521**

Implementation Strategies

Of the recommendations made in this report, the consulting team believes the district should focus first on implementing these 12:

- Recommendations in the compliance areas:
  - Charge the NS program with a reasonable indirect cost rate.
  - Improve the effectiveness of staff training (and comply with HHFKA).
  - Update child nutrition procurement to meet USDA rules and to meet food and supply quality expectations of customers
- Recommendations related to the new bell schedule – these require quick action prior to the finalization of 2016-17 class schedules at each school:
  - Adjust the high school meal program to accommodate the adjusted school bell times by eliminating second breakfast and adding those minutes to the lunch periods.
  - Provide all elementary students with a minimum of 20 minutes to eat lunch.
  - Require recess before lunch for all elementary students.
- Recommendations for short-term capital spending – these require quick action to spend available capital money prior to the end of the 2015-16 school year:
  - Expand serving options to include grab-and-go carts and reimbursable vending machines.
  - Improve serving line equipment.
  - Purchase one software program that is comprehensive and web-based so that real time data are available to school staff and central office staff for efficiency and analysis.
- Recommendations to improve student participation – in addition to the previous nine, these are ones that can be implemented with relative ease and should have a substantial positive impact on student participation:
  - Require all schools to have available all menu options for the last student in line each serving period.
  - Expand menu offerings to include self-serve food bars in secondary schools.
  - Add a consistent salad, sandwich, yogurt parfait entrée in elementary schools, eliminating the second hot entrée.

Finally, the consulting team identified eight recommendations whose implementation could likely be completed as "summer projects," with final rollout at the start of the 2016-17 school year. These eight are:

- Ensure an adequate pool of substitutes - as part of improving the availability of substitutes, the district should explore contracting with a temporary staffing agency.
- Implement best practices in menu planning – the summer months would be an ideal time to review all menus in depth and make improvements.
- Improve salad bar standardization – area supervisors should review the existing guidance on salad bars in comparison to those recommended in this report and determine how guidance, training, and oversight should be improved.
- Develop a complete equipment inventory that includes condition status – area supervisors could be tasked with populating an improved equipment inventory.
- Develop an alternative source for equipment maintenance and repair – district leadership should meet to discuss how to proceed with implementation of this recommendation, with a goal of having an alternative source in place for the start of the 2016-17 school year.
- Improve cafeteria menu and signage – area supervisors could take photos of menu offerings and developed standard, preprinted signage to be used in all cafeterias.
- Create a process for managers to order smallwares from the central warehouse – the current process should be reviewed and improvements developed. Area supervisors should also ask all cafeteria managers to provide a listing of existing smallwares they have on hand, so that shortages can be addressed and needs anticipated.
- Improve the financial operations for the NS program by focusing on selected metrics in a dashboard – district staff should develop and test a prototype for this.

1 Introduction

In March 2016, Seattle Public Schools (SPS) contracted with Prismatic Services, Inc., to provide the district with consulting services for its Nutrition Services (NS) Department. As detailed in the district's Request for Proposals and Prismatic's proposal, the primary objectives of the study were:

- review and analyze management structure and service delivery model in light of increasing enrollment and declining participation rates;
- review best practices and current organizational structure related to roles and responsibilities, efficiency and effectiveness of service delivery, career ladder structures and professional development;
- review current menu, supply chain, and production schedules with focus on creating a climate of customer service and satisfaction, increasing participation rates, and utilizing capital equipment investments; and
- review and analyze current inventory of kitchen equipment and provide recommendations on equipment purchase and/or replacement based on the district's current service model, accommodation of changes to menus to improve customer satisfaction and participation, and improve safety conditions.

This report is provided in fulfillment of Prismatic's contract.

Background

School meal programs began with the *National School Lunch Act of 1946*, which authorized the National School Lunch Program (NSLP) to "safeguard the health and well-being of the nation's children." The program, administered by the U.S. Department of Agriculture (USDA), is open to all public and nonprofit private schools, along with all residential childcare institutions.

The *Child Nutrition Act of 1966* established the School Breakfast Program (SBP). This is a federally-assisted meal program that provides nutritionally balanced, low-cost or free breakfasts to children in public schools, nonprofit private schools, and residential child care institutions.

Seattle participates in the NSLP, the SBP, afterschool snack, and the Child Nutrition Commodity Program. Districts that participate in these federal programs receive cash subsidies and donated commodities from the USDA for each eligible meal they serve. In return, the district must serve meals that meet federal guidelines for nutritional values, and it must offer free or reduced-price meals to eligible students.

Students in the lowest socioeconomic bracket qualify for free meals, while others qualify for reduced-price meals. All meals served according to federal guidelines receive some level of reimbursement, including those served to students who pay full price. School districts do not receive federal reimbursement support for teacher or guest meals. The *Healthy Hunger-free Kids Act of 2010* (*HHFKA*) provides an additional six cents reimbursement per lunch to school districts that are certified as compliant with the new meal patterns.

Exhibit 1-1 shows the applicable breakfast and lunch federal reimbursement rates for the most recent three years. The rates listed include the additional six cents reimbursement, since Seattle has been certified as compliant.

Exhibit 1-1
Federal Per-Meal Reimbursement Rates

	School Breakfast Program			National School Lunch Program		
	2013-14	2014-15	2015-16	2013-14	2014-15	2015-16
Free	$1.58	$1.62	$1.66	$2.99	$3.04	$3.07
Reduced-price	$1.28	$1.32	$1.36	$2.59	$2.64	$2.67
Paid	$0.28	$0.28	$0.29	$0.34	$0.34	$0.35

Source: USDA, 2016

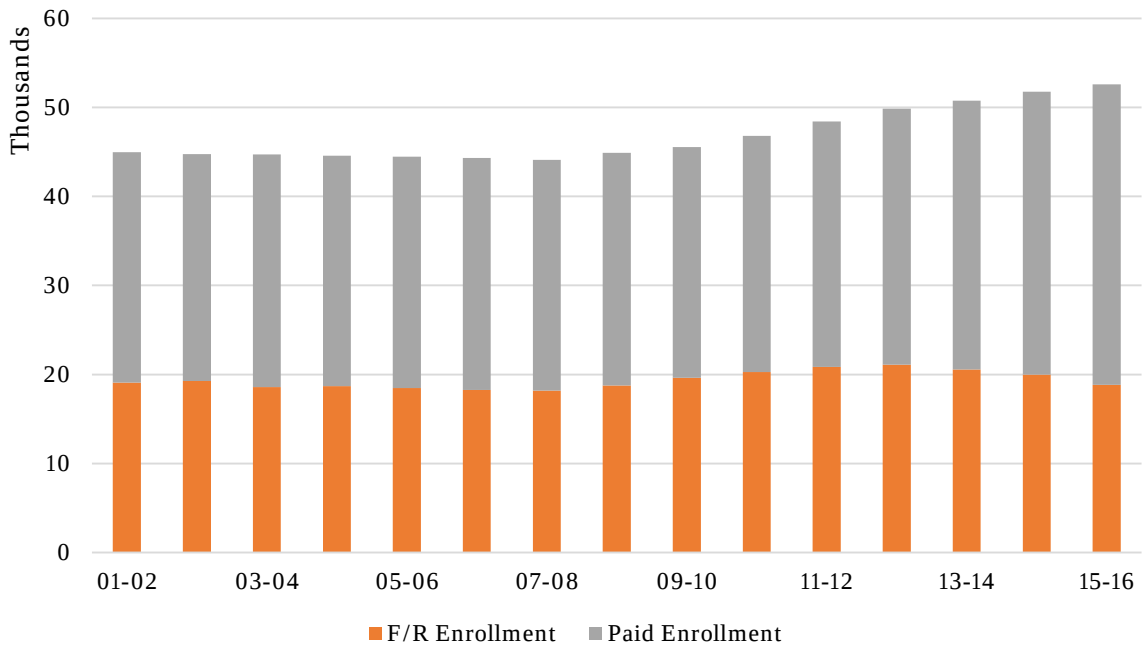
Seattle also has 12 schools participating in the USDA Fresh Fruit and Vegetable Program (FFVP), which provides fruits and vegetables to serve as mid-morning or mid-afternoon snacks. The intent of the program is to promote healthy eating habits and to expose students to a variety of fruits and vegetables. To qualify for the program, at least 50 percent of a school's students must qualify for free or reduced-price meals.

This year, NS provides free breakfast to all students in nine schools. Another five schools were served through the Community Eligibility Program (CEP), which provides free breakfast and lunch to all students and eliminates the requirement for families to submit an application for free or reduced-price meals.

Effectiveness in student nutrition service is measured by the level of service provided to school children, student meal participation rates, nutrition education efforts, and compliance with federal, state, and local policies. Efficiency is measured by the division's cost per meal and staff productivity performance measures. The main goal of a successful student nutrition service operation is to provide nutritious meals to students every day school is in session and to do so at a minimum of breakeven cost.

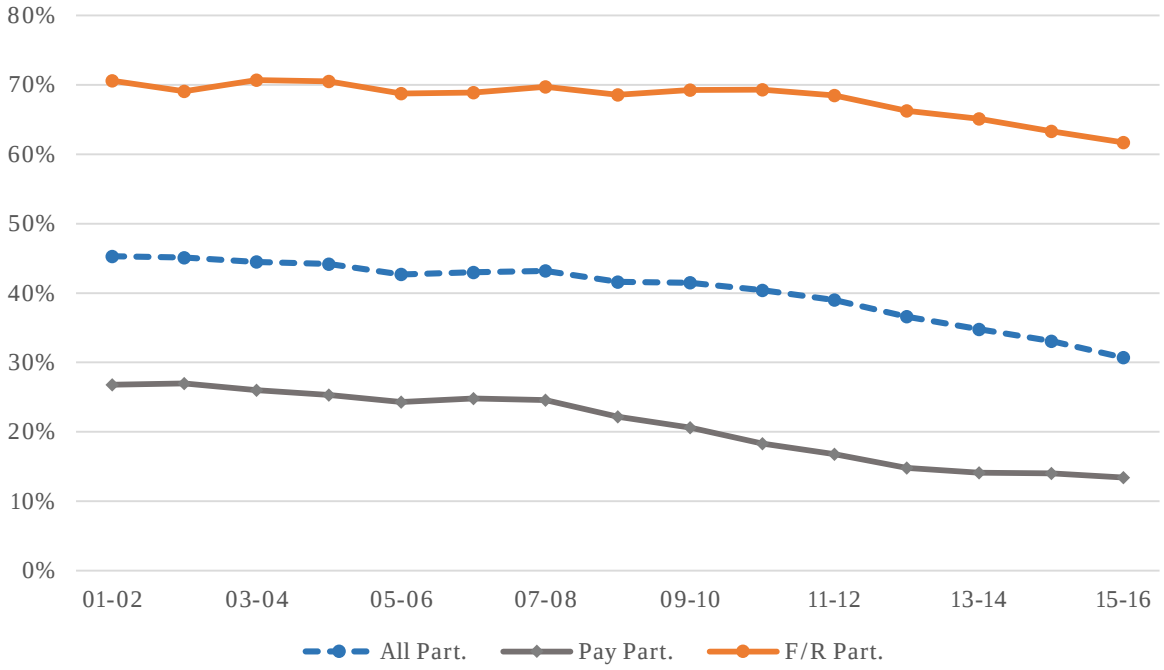
Exhibit 1-2 provides an overview of the trend in SPS student enrollment. As district enrollment has grown from 45,000 in 2001-02 to nearly 53,000 in 2015-16, the number of students who qualify for free or reduced-price meals has remained steadier, ranging between 18,000 and 21,000. **Exhibit 1-3** shows the trend in lunch participation overall, and for full-pay versus free/reduced-price students. Overall participation was 45 percent in 2001-02, 2002-03, and 2003-04, but has been slowly declining since then. Full-pay and free/reduced participation followed a similar trend. The drop-off in full-pay participation has been steeper, from a high of 27 percent in 2001-02 to a low of 13 percent for 2015-16, a decline of 14 percentage points. Free/reduced participation has declined by nine percentage points over the same time period.

Exhibit 1-2
Trend in Student Enrollment



Source: SPS, March 2016

Exhibit 1-3
Trend in Student Lunch Participation



Source: SPS, March 2016

Methodology

Prismatic's work plan for this project encompassed six tasks:

1. Initiate project.
2. Collect and review program data.
3. Review survey data already collected.
4. Complete fieldwork.
5. Develop draft report.
6. Prepare final report and close project.

Prismatic provided a team of four consultants along with clerical and technical staff. The project manager completed an advance visit to the district March 3-4, 2016 to conduct initial interviews and make logistical arrangements for the full team visit. The project manager completed eight interviews in that visit to gather general opinions on the efficiency and effectiveness of current NS operations.

The full team completed fieldwork March 14-25, 2016. The consulting team interviewed NS central office staff, representatives of the Local 609, and central office staff members outside NS. In total, the team completed 30 individual interviews.

At the school level, the consulting team conducted six focus groups, three with cafeteria managers and three with cafeteria employees. In total, nine cafeteria managers and 15 cafeteria staff participated in a focus group. The consulting team also met with school-based cafeteria staff as part of breakfast and lunch observations. Some students were interviewed anecdotally as part of breakfast and lunch observations. Outside SPS, the consulting team contacted various other student nutrition persons as resources in developing this report, including representatives of the Office of the Superintendent of Public Instruction (OSPI). The consulting team also completed a focus group with three parents of SPS students.

All members of the consulting team visited the NS central kitchen and warehouse to assess operations. Team members also visited a total of 32 schools to observe meal preparation, serving line operations, adequacy of space and equipment, and use of staffing. In some cases,

the team member met briefly with the school principal or designee to gather stakeholder input on NS effectiveness. The schools visited were:

Elementary/K-8	Middle	High
Alki	Denny	Franklin
Gatzert	Eckstein	Garfield
Kimball	Hamilton	Ingraham
Laurelhurst	Mercer	Nova
Lawton	Washington	Ranier
Lowell	Whitman	Roosevelt
Maple		South Lake Alternative
Martin Luther King Jr.		West Seattle
Montlake		
Queen Anne		
Roxhill		
Salmon Bay		
Sand Point		
Sanislo		
T.O.P.S.		
Thornton Creek		
View Ridge		
Wedgwood		

Some schools were visited more than once. For most schools, the consulting team completed an observation using a standardized rubric so that comparisons among schools could be made. This observation included photographing current conditions in the kitchen and dining areas of the cafeteria.

Commendable Areas

Prismatic found two areas of the NS operation to be commendable:

- **NS and Local 609 recognize the value of professional membership and training and the SNA certification program.** Hourly salary rate increases are given to those employees who provide proof of SNA certification. Classes offered by NS, OSPI, and Washington School Nutrition Association (WSNA) are also eligible for training increments up to 26 hours per year. When being considered for promotion, one of the criteria given additional points is whether the employee has become certified with SNA.

  An indicator of one of the best practices in the staffing and human resource area of SNA's Keys to Excellence is, "When possible, compensation incentives are provided for SNA certification and SNS credentialing, as well as completion of school nutrition program training classes".[1]

- **A self-serve salad bar is available in all Seattle Public Schools.** Every school has a daily salad bar from which students can select side items for themselves.

[1] https://schoolnutrition.org/keys/

Exhibit 1-4 shows a salad bar in Maple Elementary School. Typical of many of the salad bars the consulting team observed, the Maple salad bar offers a variety of fresh fruit and vegetable items. Sometimes a canned item is included, sometimes a thawed frozen item. In many cases, the consulting team observed SPS students eager to select something from the salad bar and doing so without prompting by cafeteria staff.

Exhibit 1-4
Sample Seattle Salad Bar – Maple Elementary School



Source: Prismatic, March 2016

The Institute of Medicine's 2015 Recommended Dietary Guidelines for Americans noted that nutrients essential for growth, development, and health and found in vegetables and fruits continue to be under-consumed by young people. The current meal patterns for school breakfast and lunch under the *Healthy, Hunger-free Kids Act of 2010* specify that a serving of either fruit, vegetable, or a combination of fruit and vegetable be selected with each meal. The quantity is dependent on age and grade. The guidelines require that variety of vegetables from vegetable subgroups be offered and that selection of these components are to be encouraged.

Acknowledgements

Prismatic acknowledges and appreciates the assistance of the following individuals in the development of this report:

- Ms. Pegi McEvoy – Assistant Superintendent of Operations; and
- Ms. Teresa Fields- Interim Director of Nutrition Services.

Prismatic also thanks the central office staff of NS, the representatives of Local 609, and the many school-based cafeteria staff members who provided time, assistance, observations, and data for this review.

2 Participation

This chapter addresses issues around student participation in the meals programs of Seattle Public Schools (SPS) in the following sections:

A. Findings
B. Issues in Management
C. Issues in Policies

Student participation rates are highly variable across the nation, depending greatly on local circumstances and management. For some recent benchmarks, the Council of the Great City Schools (CGCS) has completed an annual benchmarking study for the past several years, *Managing for Results in America's Great City Schools*. CGCS is an organization comprised of 65 large urban school districts in the nation, including SPS, and its *Managing for Results* work represents an important step forward in defining and measuring key performance indicators in a number of typical district operational areas, including nutrition services.

The CGCS report notes a number of factors that influence breakfast participation:

- menu selection;
- Provision II and III and Universal Free;
- free/reduced percentage (levels of poverty);
- food preparation methods;
- attractiveness of dining areas;
- adequate time to eat;
- school bell times.

The CGCS report also notes a number of factors that influence lunch participation:

- menu selection;
- Provision II and III and Universal Free;
- dining areas that are clean, attractive, and "kid friendly," with adequate seating capacity;
- adequate number of POS stations to help move lines quickly and efficiently;
- variety of menu selections;
- adequate time to eat; and
- food preparation methods.

Exhibit 2-1 compares 2013-14 CGCS figures[1] with SPS figures for 2014-15. As shown, SPS participation is well below the CGCS medians and below the lower quartile figures.

Exhibit 2-1
CGCS Member Participation Rates Compared to Seattle

	CGCS Participation 2013-14			NS Participation 2014-15
Meal	Lower Quartile	Upper Quartile	Median	Average
Breakfast	24.6%	50.0%	31.9%	12.1%
Lunch	52.6%	76.4%	62.8%	33.0%

Source: www.cgcs.org and NS, March 2016

The annual survey study undertaken by the School Nutrition Association (SNA) provides another basis for assessing SPS participation figures (**Exhibit 2-2**). The most recent SNA survey data reflect 2013-14 operational data. The SNA survey had 1,102 district responses, including 103 from districts of 25,000 students or more.[2] Compared to these data, NS high school breakfast participation was higher, but elementary and middle breakfast participation was lower. At every level, NS lunch participation was lower.

Exhibit 2-2
SNA Survey Results Regarding Student Meal Participation

School Level	Median SNA Participation Rate for Large Districts 2013-14	NS Participation 2014-15
Elementary Breakfast	33.0%	11.6%
Middle Breakfast	19.8%	13.1%
High Breakfast	13.3%	13.4%
Elementary Lunch	68.0%	37.2%
Middle Lunch	58.0%	35.8%
High Lunch	39.0%	21.6%

Source: School Nutrition Operations Report 2014: The State of School Nutrition, School Nutrition Association, and NS, March 2016

Looking specifically at the district's low income students, one finds that there is a considerable gap between the number of students eligible for free or reduced-price meals and the number obtaining a lunch or breakfast from the district. **Exhibit 2-3** provides the rates of free/reduced participation at each school for the first part of 2015-16. On average, only 62 percent of those eligible obtain a free/reduced lunch meal; only 27 percent obtain a breakfast meal. On a daily basis, more than 7,000 low income students are not getting lunch; nearly 14,000 are not getting breakfast.

[1] These are the latest figures available from CGCS.
[2] The SNA publication considered all districts of 25,000+ students together and did not offer a further breakdown beyond that size.

Exhibit 2-3
SPS Meal Participation Rates Among Free and Reduced-Price Eligible Students
2015-16 (SEP Through JAN)

School	# F/R Students	F/R Lunch Part.	Lunch Gap: # F/R Not Fed	F/R Breakfast Part.	Breakfast Gap: # F/R Not Fed
High					
Ballard	214	37%	136	27%	156
Cleveland	523	53%	247	27%	384
Franklin	889	36%	569	31%	615
Garfield	580	35%	376	32%	394
Hale	366	48%	189	22%	286
Ingraham	334	42%	193	41%	198
NOVA	88	36%	56	18%	72
Rainier Beach	490	37%	307	33%	329
Roosevelt	218	39%	133	13%	189
Sealth	733	56%	321	27%	535
Seattle World School	238	91%	22	57%	102
South Lake	99	23%	77	21%	78
West Seattle	296	34%	196	19%	239
Middle					
Aki Kurose	565	65%	200	31%	390
Denny	601	69%	185	30%	422
Eckstein	124	56%	55	23%	96
Hamilton	78	58%	33	25%	58
Jane Addams	235	62%	89	21%	184
Madison	222	65%	78	20%	177
McClure	92	66%	31	20%	74
Mercer	747	63%	274	25%	561
Washington	479	75%	119	28%	344
Whitman	245	55%	110	14%	212
Elementary					
Adams	86	57%	37	31%	60
Alki	82	47%	44	16%	69
Arbor Heights	123	67%	41	25%	92
Bagley	59	52%	28	15%	50
Beacon Hill	268	80%	55	31%	184
Blaine	42	68%	14	36%	27
Broadview	375	63%	140	18%	308
Bryant	30	76%	7	42%	18
Cascadia @ Lincoln	27	59%	11	14%	23
Coe	65	51%	32	17%	55
Concord	351	74%	91	30%	244
Day	98	72%	28	23%	75
Dearborn Park	282	79%	58	30%	198
Dunlap	279	70%	85	23%	216
Emerson	231	70%	69	33%	155
Fairmont Park	58	52%	28	18%	47

School	# F/R Students	F/R Lunch Part.	Lunch Gap: # F/R Not Fed	F/R Breakfast Part.	Breakfast Gap: # F/R Not Fed
Gatewood	131	63%	49	24%	100
Gatzert	260	83%	44	42%	150
Graham Hill	231	79%	48	32%	158
Green Lake	47	48%	24	15%	40
Greenwood	68	55%	31	24%	52
Hawthorne	250	78%	55	27%	184
Hay	65	72%	18	19%	53
Hazel Wolf	154	69%	47	28%	111
Highland Park	295	77%	67	31%	203
John Stanford	33	51%	16	16%	28
K-6 STEM @ Boren	112	64%	40	22%	87
Kimball	229	71%	67	20%	183
Lafayette	112	68%	36	19%	90
Laurelhurst	91	68%	29	18%	75
Lawton	40	50%	20	10%	36
Leschi	193	64%	70	23%	149
Licton Springs @ Lincoln	82	65%	29	44%	46
Lowell	191	60%	77	32%	130
Loyal Heights	26	42%	15	5%	25
Madrona	173	74%	45	30%	121
Maple	311	80%	62	18%	256
Martin Luther King	243	73%	66	30%	169
McDonald	22	65%	8	11%	20
McGilvra	23	82%	4	20%	18
Montlake	13	68%	4	6%	12
Muir	267	75%	66	17%	223
North Beach	27	44%	15	8%	25
Northgate	209	74%	54	52%	101
Olympic Hills @ Cedar Park	247	66%	84	36%	158
Olympic View	171	68%	56	17%	141
Orca	113	44%	63	9%	103
Pathfinder	92	56%	40	26%	68
Queen Anne	29	53%	14	10%	26
Rainier View	178	77%	42	29%	127
Rogers	154	64%	56	19%	125
Roxhill	289	66%	98	30%	203
Sacajawea	68	60%	27	14%	59
Salmon Bay	59	32%	40	8%	54
Sand Point	112	64%	41	27%	81
Sanislo	187	77%	43	39%	115
Schmitz Park	72	43%	41	8%	66
South Shore	407	71%	120	26%	302
Stevens	112	60%	45	20%	89
Thornton Creek	22	65%	8	10%	20

School	# F/R Students	F/R Lunch Part.	Lunch Gap: # F/R Not Fed	F/R Breakfast Part.	Breakfast Gap: # F/R Not Fed
Thurgood Marshall	155	61%	61	24%	118
TOPS	130	62%	49	24%	98
Van Asselt	419	77%	94	23%	322
View Ridge	53	51%	26	21%	42
Viewlands	176	68%	56	24%	134
Wedgwood	43	64%	16	14%	37
West Seattle Elem.	375	70%	112	35%	242
West Woodland	38	65%	13	18%	32
Whittier	45	57%	20	25%	34
Wing Luke	288	73%	78	25%	217
Total	**18,843**	**62%**	**7,213**	**27%**	**13,771**

Source: SPS, with Prismatic calculations, March 2016

Student participation in a district's meal programs, including National School Lunch and School Breakfast, are directly impacted by a variety of operational factors, including student access to food, food quality and variety, alternatives to the school meal, and cafeteria environment. As discussed in this report, SPS faces all of these challenges. As a result, student meal participation is generally poor. Improving student participation is a direct or indirect objective of most of the recommendations of this report.

A. Findings

Finding 1

The indirect costs charged to the NS program are excessive. This leads to a distorted picture of the financial status of the program. Instead of a true indirect cost allocation methodology, each year the district applies the maximum rate allowed by the state. The district lacks an accounting rationale for this transfer amount.

Indirect costs are those costs incurred for a common or joint purpose benefiting more than one cost objective and not readily assignable to the cost objectives specifically benefited. The cost of operating and maintaining buildings and equipment, depreciation or use charge, and administrative salaries are examples of expenditures usually considered indirect. There are two problems with not charging the NS program for accurate indirect costs:

- The true cost of the student nutrition program is not shown, perhaps leading to erroneous conclusions about the financial success of the program. While initially questioned about the current financial status of the NS program, district administrators stated that the program was operating at a level where revenues exceeded expenditures. However, financial reports developed by the district and provided to the state show just the opposite when the currently used indirect rate is applied.

- Any time allowable indirect costs are not charged to the NS, the district's general fund must make up the difference. These general funds could instead be used for any number of other district needs, including those in the classroom.

The indirect rate currently being applied to the NS program is the unrestricted indirect cost rate. For 2015-16, that rate is 16.71 percent. **Exhibit 2-4** shows the trend in the indirect cost rate applied to the NS program and resulting negative impact on the program's bottom line.

Exhibit 2-4
Indirect Rates and Charges to the NS Program

Year	Indirect Rate Used	Charge to NS Program
2010-11	15.42%	($1,134,186)
2011-12	16.53%	($1,199,823
2012-13	16.74%	($1,265,253)
2013-14	16.82%	($1,445,315)
2014-15	17.50%	NA
2015-16	16.71%	NA

Source: OSPI Reports

As a result of applying the maximum allowable unrestricted indirect rate, the NS program appeared to operate at a deficit in most previous years (**Exhibit 2-5**). For the two most recent years for which data are available, the resulting deficits were sizeable.

Exhibit 2-5
Financial Results of NS Operations Over Time

After Indirect Charge	2010-11	2011-12	2012-13	2013-14
Excess of Revenues Over Expenditures	($469,197)	($354,393)	($680,488)	($927,732)
Excess of Revenues Over Net Expenditures	($13,450)	$83,532	($257,668)	($592,898)

Source: OSPI Reports

The current year unrestricted indirect cost rate is based on the calculated indirect costs for the district from two years prior. Thus the figure for the 2015-16 indirect rate were determined by the actual 2013-14 indirect costs, as recorded in Program 97, according to the state's *Accounting Manual for Public School Districts.* However, those costs include total program expenditures for some areas, such as the SPS business office and SPS human resources departments from which NS receives some services, but those are areas in which NS meets some its own needs internally. It also includes total program expenditures for the district's warehousing operation, but NS pays fees directly to the warehouse on top of that.

According to USDA documentation, school meals programs may be charged indirect costs. To do so, indirect costs must be "reasonable, necessary, and allocable":

- costs that are incurred by the district for the benefit of multiple programs, functions, or other cost objective, but cannot be identified easily and specifically with one program or other cost objective;
- necessary for the general operation of the school meal program; and

- must be assigned to the benefiting programs through an allocation process.[3]

To charge a cost as indirect to a school meal program, an indirect cost must be "adequately documented."

Examples of typically allowable indirect costs provided by the USDA are:

- fringe benefits;
- accounting;
- payroll;
- purchasing;
- facilities management; and
- utilities.

According to an OSPI representative, although OSPI calculates the restricted and unrestricted indirect cost rates for each district in the state, districts are not required to use only one or the other. Rather, they are state-provided maximums. Further, OSPI does not seek input from the district as to the indirect cost rates used in the district's own accounting. Appendix A of the Federal regulation 2CFR225 provides detail on the allowable costs that can be included in the indirect costs assessed against a school meal program.

According to SPS staff, the use of the maximum allowable indirect cost rate has been adopted for use with the NS program by default. There has been no recent discussion as to whether the rate is appropriate. In comparison, Spokane Public Schools charges to its nutrition services program only the restricted direct cost rate, which is typically one-fifth (or less) that of the unrestricted rate. While this application of an indirect rate without consideration as to its applicability to the specific organization and operation of a school meal program is problematic, it provides an example of how other large districts in Washington apply indirect rates to their programs.

Recommendation

Charge the NS program with a reasonable indirect cost rate.

The intent of USDA regulations in this regard is that a school meal program pays its fair share of indirect costs and nothing more. Charging the NS program an appropriate, adequately documented indirect rate, which would likely be between the calculated restricted and unrestricted indirect rate, would allow the NS department to have a truer picture of the financial operations of the program. When the program generates revenues in excess of expenditures after the indirect charge, this excess (or "profit") can be reinvested in the program. Areas of obvious need for investment identified by the consulting team include regular equipment replacement, improved serving line equipment, improved line signage, and alternative serving modes.

[3] https://www.youtube.com/watch?v=Lt4V7ZZqvGY&feature=youtu.be

Fiscal Impact

This recommendation can be implemented with existing resources.

B. Issues in Management

In the current environment of scarce fiscal resources, an effective system of accountability for business and financial operations management is imperative for a nutrition services program to meet student needs and community expectations. A credible school food services accountability system includes adequate and appropriate budgets supporting school food services goals and objectives, comprehensive and transparent financial reporting, and dependable asset management. Such an accountability system helps to ensure confidence in, and support for, the district's school food services programs.

Management Issue 2-1

The NS department is essentially a $13 million enterprise, but it is functioning without sufficient timely financial information. NS department leaders are operating the program without data to analyze commonly used metrics in school food programs, while cafeteria managers lack knowledge of whether their operations are profitable.

The district does compile monthly data by campus in these areas:

- number of lunch meals served, broken down by paid, reduced, and free;
- participation rates for lunch by each eligibility category;
- number of breakfast meals served, broken down by paid, reduced, and free;
- participation rates for breakfast by each eligibility category;
- number of snacks served;
- amount of a la carte revenue generated;
- amount of vending revenue generated;
- number of adult breakfast and lunch meals served;
- translation of these data into daily meal equivalents;
- number of daily work hours assigned to the cafeteria;
- the Meals Per Labor Hour (MPLH) goal; and
- the calculated MPLH rate.

This data compilation provides an excellent basis from which to compare cafeteria performance to commonly used metrics beyond MPLH, but this is not currently being done. This is likely due in part to the number of unfilled positions in the NS central office. These data are also not being shared in any actionable way with cafeteria managers who, by their daily activities can increase student meal participation and program revenues.

Productivity reports are an important tool for school food service programs. Labor and benefit costs represent a sizeable portion of total expenditures in every food service program. If current data are not readily available to supervisors, and trends in either direction are not analyzed, then adjustments will not be made in a timely manner.

The most common means of measuring employee productivity in child nutrition is the Meals per Labor Hour (MPLH) measure. SPS is calculating MPLH at the cafeteria level, but it not making use of subsequent analysis to improve the program. In recent years, MPLH has only been used to reduce allocated staff hours for the cafeterias deemed the furthest below MPLH goals.

An important measurement of program efficiency is the analysis of expenditures to revenue, referred to as an operating ratio. Operating ratios are calculated by dividing each expenditure category in a given time period by the total revenue for the same time period, which yields a percentage. **Exhibit 2-6** provides SPS operating ratios for the past two years.

Industry best practices exist to guide operators to ensure financial soundness of the program. Management Recommendations suggest that no more than 40 to 45 percent of revenue be spent on labor and benefits, and the same recommendation exists for food and supplies. No more than 85 percent of revenue should be spent on food, labor, and benefits combined. Labor and benefits costs in SPS are higher than industry best practices and food costs are lower. Managing operating ratios is a key tool to ensuring food service program financial stability.

Exhibit 2-6
SPS Operating Ratios

Category	SPS Expenditures	SPS Percentage of Revenue	Industry Standard
2014-15			
Labor/Benefits	$7,141,030	54%	40-45%
Food/Supplies	$5,422,875	41%	40-45%
Other	$632,972	5%	15-20%
Total Expenditures	**$13,196,877**	**100%**	**N/A**
2013-14			
Labor/Benefits	$7,063,026	51%	40-45%
Food/Supplies	$5,293,394	38%	40-45%
Other	$1,078,736	8%	15-20%
Total Expenditures	**$13,435,156**	**97%**	**N/A**

Source: SPS and Prismatic calculations, March 2016

NS department leaders are currently managing the program without sufficient attention to the bottom line. This is primarily due to vacancies in a number of key positions, but it is nevertheless negatively impacting the financial performance of the program. **Exhibit 2-7** provides financial data for NS for the past several years. As shown, the program is not operating at a level where total revenues exceed total direct and indirect expenditures. This means that the district's general fund is subsidizing the program, using dollars that could be spent elsewhere, including in the classroom (a subsequent finding in this chapter discusses whether the indirect cost rate currently applied is appropriate, so it is not clear to what extent the general fund is truly subsidizing the NS program).

Exhibit 2-7
Financial Results of NS Operations Over Time

	2010-11	2011-12	2012-13	2013-14
Revenues				
Paid Lunches	$3,145,136	$3,013,832	$2,867,417	$2,915,211
State Payment	$297,005	$309,255	$301,647	$285,754
Federal Payment	$9,029,765	$9,461,755	$9,626,078	$9,766,673
Federal Commodities	$488,222	$435,485	$304,715	$875,101
Other Payments	$0	$0	$0	
Total Revenues	$12,960,127	$13,220,327	$13,099,858	$13,842,739
Direct Expenditures				
Salaries and Benefits	$6,831,241	$6,685,762	$6,718,035	$7,063,026
Supplies	$566,908	$590,520	$772,753	$768,578
Purchased Services	$57,794	$37,292	$62,092	$56,606
Food - Supplies	$4,268,648	$4,523,762	$4,407,581	$5,293,394
Food - Purchased	$387,777	$324,098	$282,346	$0
Travel & Other	$182,485	$211,173	$269,664	$253,552
Capital Outlay	$286	$2,291	$2,623	$0
Total Direct Expenditures	$12,295,138	$12,374,897	$12,515,093	$13,435,156
Net Expenditures	$11,839,391	$11,936,973	$12,092,273	$13,100,322
Indirect Expenditures				
Unrestricted Indirect Rate	15.4%	16.5%	16.7%	16.8%
Applied Indirect Expenditures	$1,134,186	$1,199,823	$1,265,253	$1,335,315
Excess of Revenues Over Expenditures	($469,197)	($354,393)	($680,488)	($927,732)
Excess of Revenues Over Net Expenditures	($13,450)	$83,532	($257,668)	($592,898)
Deficit from previous Year	($615,826)	($629,276)	($545,744)	($803,412)
Current Deficit	($13,450)	$83,532	($257,668)	($592,898)
Net Deficit Carryforward	($629,276)	($545,744)	($803,412)	($1,396,310)

Source: OSPI 1800 Reports, March 2016

A prime example of the department's lack of attention to the financial bottom line in recent years was the granting of full benefits to all cafeteria workers once they work 3.5 hours per day. No other employee group in the district earns full benefits at what is half-time employment. In June 2006, the School Nutrition Association published the *School Nutrition Compensation and Benefits Report: Benchmarking Salary and Benefits of School Nutrition Professionals*. This study included survey responses from 1,218 food service operations across the country. Among other survey items, the SNA collected relevant comparison information related to the length of work day and benefits offered to food services workers. For districts with greater than 25,000 students enrolled, food services employees had to work an average of 29.0 hours per week to qualify for full benefits, with a range from 15.0 hours to 40.0 hours. Currently, SPS is offering benefits at a level well below this average. As a fully staffed NS department begins to focus again on the financial stability of the program, mitigating the cost of this negotiated item will likely become key. District staff estimates that full benefits for a 3.5-hour employee cost $10,000 per year. That cost would be the same for a 4-hour+ employee, so it would be reasonable to work to create staffing schedules that favor

more work hours per employee and less employees overall, since the incremental cost of additional hourly wages is small in comparison to the benefit cost.

Typical duties of a NS director are:

- direct the compilation and analysis of costs and revenues, the development of staffing formulas, and the allocation of staff to food services units;
- direct the determination of item and overhead costs, and recommend price and portion internal controls process;
- direct the oversight of the direct and indirect fund charges in accordance with the district's internal controls process; and
- direct the compilation, verification, and reporting of data in order to meet federal and state requirements relative to subsidized nutrition programs.

One major role of the director relative to the compilation and analysis of costs and revenues is to establish a spending plan determined by anticipated revenue balanced with anticipated expenditures. State and federal revenues are estimated based on trends and anticipated appropriations. Local revenue is based on meal participation goals and projections and estimated interest earnings on investments. Expenditures are based on the goals of the program which include provision for the health of students through nutritious meals and the health of the NS program through responsible management.

Communicating ongoing performance vis-à-vis departmental plans and goals is another major goal for the NS director. **Exhibit 2-8** provides an example of a cafeteria-level monthly report used in another school district. It provides information important to that district in a manner that it is easy for a cafeteria manager to digest and then operationalize in the form of daily adjustments. **Exhibit 2-9** provides the full list of reports that the consulting team recommends a highly functioning school meal program develop. Samples of these reports can be found in *Financial Management: A Course for School Nutrition Directors 2nd Edition* from the ICN.[4]

[4] National Food Service Management Institute. (2014). *Financial management: A course for school nutrition directors* (2nd ed). University, MS; Author.

Exhibit 2-8
Sample Cafeteria-Level Monthly Report

Revenue:	Current Month	Year to Date
Meal Revenue	$2,411.40	
Supplemental Sales	$1,648.90	
Other Revenue	$75.34	
Total Reimbursement	$15,061.75	
TOTAL REVENUE:	$19,197.39	$139,903.44

Expenses:	Current Month	Year to Date
Inventory/Food Cost		
Beginning Inventory	$5,973.00	
Purchases	$7,167.00	
Transfers	($70.00)	
Ending Inventory	*$5,932.00*	
Total Food Usage:	$7,138.00	$51,686.00
Inventory/Supply Cost		
Beginning Inventory	$1,413.00	
Purchases	$753.00	
Transfers	$311.00	
Ending Inventory	*$1,564.00*	
Total Supply Usage:	$913.00	$6,618.00
Labor Costs		
School Staff	$8,186.19	
Temporary Labor	$0.00	
Total Labor:	$8,186.19	$67,638.24
Overhead	($108.37)	$6,207.11
TOTAL EXPENSES:	$16,128.82	$132,149.35
GAIN or (LOSS):	$3,068.57	$7,754.09
% GAIN or (LOSS):	15.98%	5.54%

Supervisor Comments/Suggestions:

Percent of Revenue

	Total Cost	% of Total Revenue	Goal Less Than
Food	$7,138.00	37.18%	**40%**
Supplies	$913.00	4.76%	**5%**
Labor	$8,186.19	42.64%	**40%**
Overhead	($108.37)	-0.56%	**7%**
Total Cost	$16,128.82	84.02%	**92%**

Total Meal Equivalents Per Day

Total Breakfasts:	56
Total Lunches:	264
Supplemental Sales:	36
Total Meal Equivalents:	**357**

% of Eligible Meals Served

Average Daily Attendance: 426

	# Eligible	% Served	Goal
Free	223	85.67%	
Reduced	14	88.72%	
Paid	219	26.56%	

Current Month Plate Cost

	Total School Cost	Cost Per ME	Goal
Food	$7,138.00	$1.05	**$1.08**
Supplies	$913.00	$0.13	**$.13**
Labor	$8,186.19	$1.38	**$1.08**
Overhead	($108.37)	($0.02)	**$.19**
Total Cost	$16,128.82	$2.55	**$2.48**

YTD Plate Cost

	Total School Cost	Cost Per ME	Goal
Food	$51,686.00	$1.05	**$1.08**
Supplies	$6,618.00	$0.13	**$.13**
Labor	$67,638.24	$1.37	**$1.08**
Overhead	$6,207.11	$0.12	**$.19**
Total Cost	$132,149.35	$2.67	**$2.48**

Source: Prismatic files, October 2011

Exhibit 2-9
Sample Financial Management Reports Used to Monitor Nutrition Services Operations

Report	Data	Uses	Frequency
Budget	• Forecasted revenue by source based upon estimates of participation, reimbursement, meal prices, and new revenue sources • Forecasted expenditures based upon a determination of increases or decreases in each category	• Allow for a projection of financial performance for the next school year • Allow for comparisons between actual and forecasted performance	Once a year with monthly monitoring and adjustments as necessary
Statement of Revenue and Expenditures (Profit and Loss Statement)	• All revenues by source and expenditures by category • Net gain/loss for the time period • Comparison of current month to previous month and year to date • Reflects activity over one month	• Determine if revenues are sufficient to cover expenditures • Identify sites needing adjustments to reduce loss	End of each month
Statement of Net Position (Balance Sheet)	• Assets, liabilities, fund balance • Reflects financial position at a point in time	• Determine amount of fund balance available for expenditures • Verify if program has no more than three months average operating costs in reserve • Determine financial status of program	End of each month
Key Operating Ratios	• An analysis of expenditures to revenue • Calculated by dividing each expenditure by total revenue generated during the same time period	• Determine the percentage of revenue that is used for food, labor, benefits, supplies, overhead, capital expenditures, and indirect costs • Compare actual ratios to goals set and industry standards • Determine if the program is operating at break even or experiencing a profit or loss	Monthly or quarterly
Meals Per Labor Hour	• Calculated by dividing total number of meals/meal equivalents by total number of labor hours for each site • Meal equivalents are determined by converting all meals and à la carte revenue to a standard unit (lunches)	• Analyze staffing patterns by site and compare to goals set • Identify sites needing adjustments to labor hours • Allow comparison to industry standards	Monthly

Report	Data	Uses	Frequency
Participation Reports	• Average daily attendance (ADA), number and percentage of students eligible by category (free, reduced, paid), average number of breakfast and lunch meals served by category, daily participation percentage by eligibility category • District level and site level data	• Determine what percentage of eligible students are participating in each program • Identify eligibility categories to target for participation improvement • Identify sites not meeting participation goals • Allow comparison to industry standards	Monthly and at end of year
Pre and Post Menu-Costing	• Menu items • Forecasted and actual amounts used • Food cost per menu item • Total cost per menu • Cost per serving • Average food cost per meal • District and site level data	• Allow for comparison of actual cost per meal to revenue per meal (reimbursement, commodity value, payment) • Determine menus needing adjustments for cost effectiveness • Assist in purchasing and evaluation of new products	Monthly

Source: Created by Prismatic, February 2015

Management Recommendation

Improve the financial operations of the NS program by focusing on selected metrics in a dashboard.

The consulting team recognizes that the department is currently understaffed in the leadership ranks. Therefore, NS should initially focus on developing a dashboard that reports on just the key metrics shown in **Exhibit 2-10**. All should be developed and reported on a monthly basis. All should include a comparison to the same month in the previous year.

Exhibit 2-10
Initial NS Dashboard Metrics

Central Level

- Statement of Activities Report (P/L Report)
  - Shows revenue sources and expenditure categories and net excess or deficit
  - Should include column for previous month and YTD
- Budget
  - Shows revenue and expenditures budgeted by line item
    - Current month data compared to previous month
    - YTD amount
    - % of total budgeted amount realized or expended YTD
  - Analysis of revenue by student eligibility type
- Operating Ratios
  - Shows % of each expenditure category to total revenue
  - Compare to goals: 40-45% labor/benefits, 40-45% food and 100% or less as a total for all expenditures
- Participation Report
  - Calculate for both breakfast and lunch
  - ADP % to attendance by free, reduced, and full pay
  - ADP % to eligibility by free, reduced, and full pay
- Meal Costs Analysis
  - Revenue per meal/meal equivalents
  - Expenditure per meal/meal equivalents

Site Level

- Participation Report
  - Calculate for both breakfast and lunch
  - ADP % to attendance by free, reduced, and full pay
  - ADP % to eligibility by free, reduced, and full pay
  - Amount of a la carte, vending, and adult meal sales
  - Compare to department goals by elementary, middle, and high
  - Compare to average for elementary, middle, and high
- Meals Per Labor Hour (MPLH)
  - Shows relationship of labor hours to meals/meal equivalents
  - Compare to department goals
- Activities Report (P/L)
  - Simplified report showing revenue and expenditures allocated to site and net excess or deficit

Source: Created by Prismatic, March 2016

The consulting team recommends that the district develop the dashboard in an infographic format.

Fiscal Impact

This recommendation can be implemented with existing resources, including resources in some departments outside of NS.

Management Issue 2-2

The district is not using the available Community Eligibility Provision (CEP) for all eligible schools. This is likely negatively impacting meal participation at those schools.

In high poverty areas, CEP allows a school to provide free breakfast and lunch to all students without the burden of collecting and processing school meal applications. CEP was a key provision of the *Healthy, Hunger-Free Kids Act of 2010*. Rather than taking school meal applications to make individual student eligibility determinations, CEP schools provide all meals for free and are reimbursed using a formula based on the percentage of students participating in other need-based programs. For it to make sense financially, the school should have a high enough poverty rate that the loss of the student-pay portion for paid meals can be tolerated.

The USDA notes these advantages to CEP:

- ***Easing administrative burden.*** *CEP allows eligible schools to provide breakfast and lunch to all students at no charge, without collecting school meal applications or monitoring eligibility when serving meals. This gives food service staff more time to focus on preparing nutritious meals their students will enjoy.*
- ***Increasing participation.*** *All children at CEP schools receive meals at no charge, incentivizing participation and increasing program revenues.*
- ***Improving efficiency.*** *CEP helps lunch lines move more quickly, allowing children more time to enjoy their meal.*
- ***Eliminating stigma****. Because all students eat at no charge, children at CEP schools are no longer identified as low-income in the lunch line, and no child at a CEP school will ever receive an "alternate" meal, or be denied a meal, due to a negative account balance.*
- ***Fighting childhood hunger****. Children attending CEP schools can count on two nutritious meals every school day, stretching families' limited food budgets and reducing hunger among our nation's children.*[5]

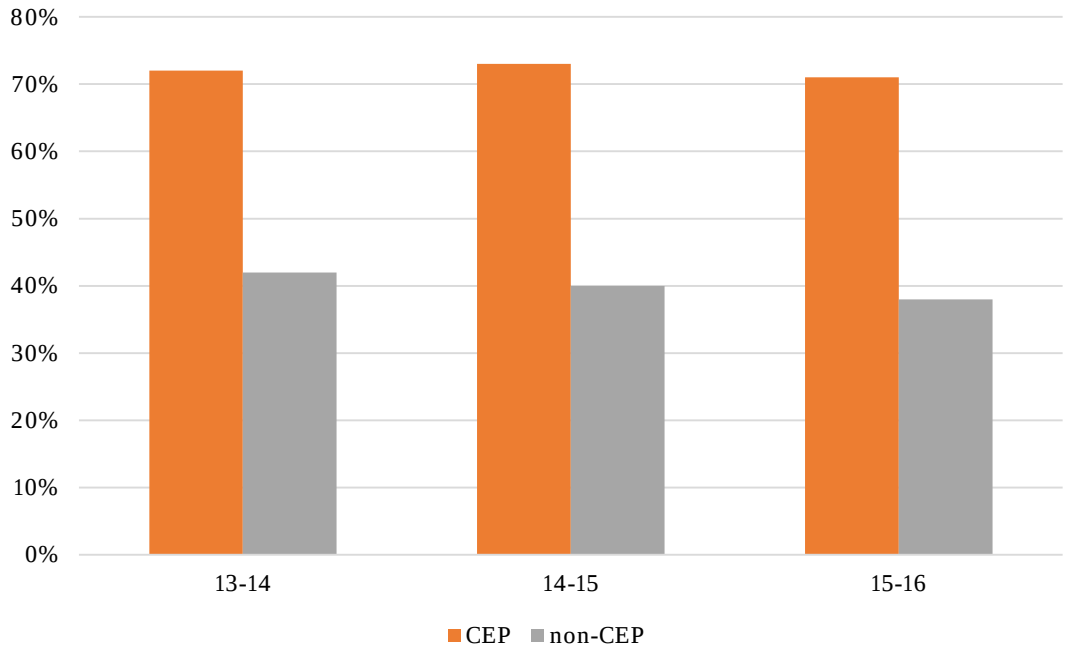
SPS implemented the CEP process in five schools in 2014-15, all elementaries: Dunlap, Emerson, Gatzert, Martin Luther King, and West Seattle. According to data from OSPI, there are an additional 20 schools for which the CEP option should be considered:

- Aki Kurose Middle School
- Concord International School
- Dearborn Park International School
- Graham Hill Elementary School
- Hawthorne Elementary School - Seattle
- Highland Park Elementary School
- John Muir Elementary School
- Leschi Elementary School
- Licton Springs K-8
- Lowell Elementary School - Seattle
- Madrona K-8 School
- Northgate Elementary School
- Olympic Hills Elementary School
- Rainier Beach High School
- Rainier View Elementary School
- Roxhill Elementary School
- Sanislo Elementary School
- South Lake High School
- Van Asselt Elementary School
- Wing Luke Elementary School

[5] http://www.fns.usda.gov/sites/default/files/cn/SP22-2016a.pdf

Comparing the lunch participation rates of the current CEP schools with all other bulk elementary schools in the district, it appears that implementing CEP has a positive effect (**Exhibit 2-11**). The participation rate before and after implementation was nearly unchanged in the CEP schools, while in the same time period lunch participation decreased in the other bulk elementary schools.

Exhibit 2-11
Comparison of Lunch Participation, CEP and Non-CEP
Among Elementary Bulk Sites Only



Source: SPS, March 2016

Management Recommendation

Implement CEP in the next 20 schools.

The district should implement CEP in the next 20 elementary schools that OSPI has identified. The NS department should meet with the principals in those schools to explain the program and solicit their assistance in advertising the change. The district should inform the parents in all the schools about the change, emphasizing that meals will be free to all, regardless of income level. The parent letter should also explain how "free" meals are supported by federal reimbursement and are not a reflection on the quality of the food.

Fiscal Impact

This recommendation can be implemented with existing resources. It should result in stable, or perhaps increased, participation rates in the CEP schools.

C. Issues in Policies

The development of policies constitutes the means by which a School Board and district leaders can communicate expectations. Policies reveal the philosophy and position of the School Board and should be stated clearly enough to provide for executive or staff direction.

Well-crafted, thoughtful policies provide the mechanism for:

- establishing the School Board's expectations;
- establishing what may be expected from the School Board;
- keeping the School Board and administration out of trouble;
- establishing an essential division between policy-making and administrative roles;
- creating guidelines within which district personnel operate;
- providing reasonable assurances of consistency and continuity in decisions;
- providing the legal basis for the allocation of funds, facilities, and other resources;
- facilitating and guiding the orientation of the Board members and employees; and
- acquainting the public with and encouraging citizen involvement within structured guidelines.

Management Issue 2-3

The NS department does not control the length of lunch periods at individual high schools. Instead, the district relies on historical practice and the decisions of principals as to the length of lunch periods and the number of students who must be served during that period. This ineffective practice has severely impacted service quality of school meals at the high schools.

Exhibit 2-12 provides a listing of high school lunch periods for 2015-16. As shown, the average serving period is just 32.5 minutes, despite an average of 737 students per serving period. If all high school students wanted to eat in an 'average' cafeteria, the cafeteria staff would need to serve and sell 59 meals per minute for 12.5 minutes in order for the last student to have 20 minutes to eat.

Exhibit 2-12
High School Lunch Periods and Serving Lines

School	# of Lunch Periods	Length of Each Lunch Period (minutes)	October 2015 Enrollment	# of Students Per Lunch Period	# of Serving Lines	# Students per Serving Line per Lunch
Ballard	2	30	1,713	857	2	428
Cleveland	2	35	840	420	3	140
Franklin	2	40	1,307	654	2	327
Garfield	1	30	1,727	1,727	5	345
Hale	1	30	1,193	1,193	2	597
Ingraham	1	30	1,246	1,246	2	623
NOVA	1	45	344	344	2	172
Rainier Beach	2	30	678	339	2	170
Roosevelt	2	30	1,721	861	2	430
Sealth	2	30	1,171	586	2	293
South Lake	1	30	108	108	1	108
West Seattle	2	30	1,009	505	1	505

Source: SPS, March 2016

Generally, the consulting team found cafeteria facilities to be underequipped to handle such high capacity meal periods. As shown in **Exhibit 2-13**, only one of the eight high schools the consulting team observed had adequate seating for the number of students in a lunch period. Only three of the eight high schools had adequate seating for just the number of students eligible for free/reduced lunch each lunch period.

Exhibit 2-13
High School Lunch Seating Shortage

High School Observed	Number of Seats	Students per Lunch Period	Seating Shortage	# Free/Reduced Students per Lunch Period
Franklin	120	654	(534)	439
Garfield	287	1,727	(1,440)	575
Ingraham	92	1,246	(1,154)	328
NOVA	125	344	(219)	242
Ranier Beach	160	339	(179)	242
Roosevelt	221	861	(640)	106
South Lake	144	108	None	100
West Seattle	168	505	(337)	145

Source: Prismatic, March 2016

Further, the consulting team found little effort by the high schools to accommodate lunching students elsewhere on campus. At Roosevelt High School, portable stand-up tables are available, but neither the custodian nor the cafeteria staff set them up for use prior to the lunch period (**Exhibit 2-14**). At Ingraham High School, there is an outdoor space immediately adjacent to the dining area, but no seating or tables are provided (**Exhibit 2-15**). The consulting team observed similar outdoor spaces at other SPS high schools as well.

Exhibit 2-14
Available Standup Seating Not Made Available



Source: Prismatic, March 2016

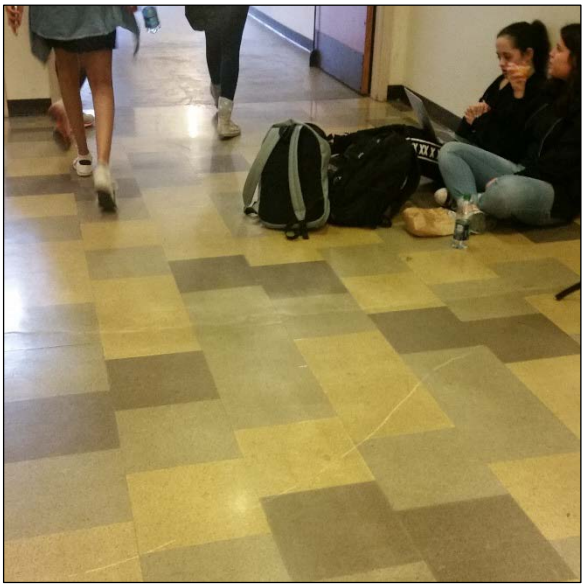
Exhibit 2-15
Outdoor Space Not Used for Dining

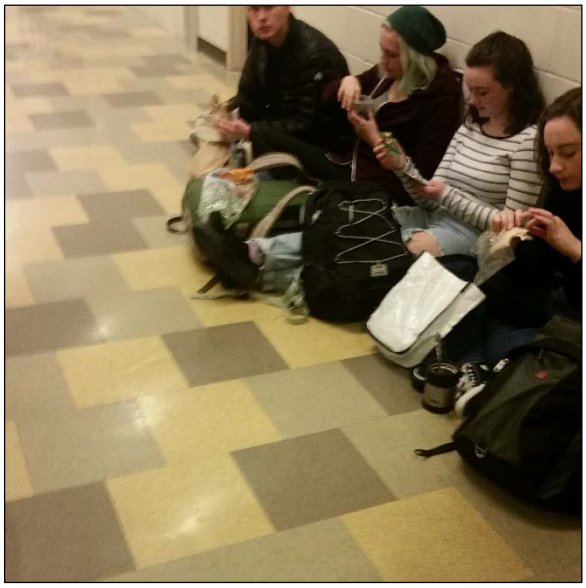


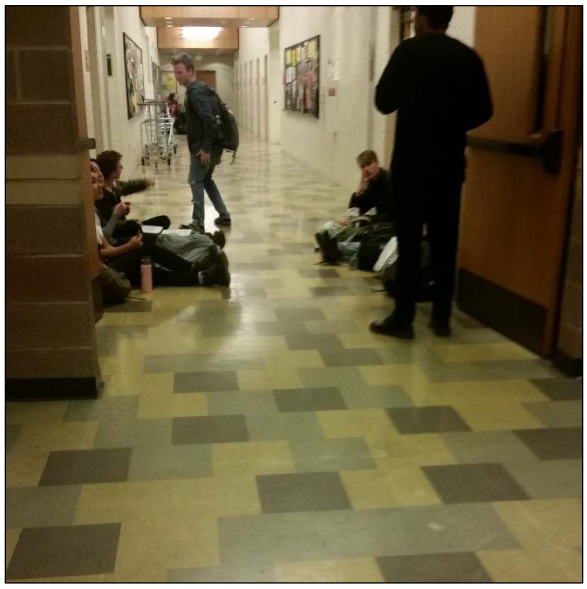
Source: Prismatic, March 2016

As a result of the lack of seating in the dining room, the consulting team observed students eating lunch while sitting on the floor of various parts of at least one high school (**Exhibit 2-16**). It is unlikely that the hallway floors are kept sufficiently clean for this to be a sanitary practice. According to some district stakeholders, this is a regular practice in more than one high school.

Exhibit 2-16
High School Students Observed Eating on Hallway Floors







Source: Prismatic, March 2016

Combined, the short lunch periods, few serving lines, and extreme lack of seating convey to high school students that they generally should not even try to obtain a school meal. It is therefore not surprising that high school lunch participation is low. For 2015-16 through January, high school lunch participation was just 18.9 percent. Given that 38.2 percent of the district's high school students qualify for free or reduced-price meals, its high school lunch participation should be much higher. For low income students the lack of true access to school lunch meals means they either go without needed nutrition or spend money they can ill afford on food items obtained off campus.

SNA's *School Nutrition Operations Report, 2014*, provides comparative data in this area. Among large districts, the median high school lunch period was 30.0 minutes. Among large districts, the most common response to the question of how many lunch periods were offered in their high schools was "it varies" by high school (**Exhibit 2-17**). However, a majority of large districts, 56.3 percent, have at least two lunch periods in each high school.

Exhibit 2-17
Number of Lunch Periods in High Schools Nationally

	One	Two	Three	Four	Five+	Varies
% of Large Districts with High Schools Having This Number of Lunch Periods	11.7%	14.6%	19.4%	18.4%	3.9%	28.2%

Source: SNA's *School Nutrition Operations Report, 2014*

SPS Board Student Wellness Policy (3405) states:

> *Students have **equitable access to healthy foods** and potable water throughout the school day—both through reimbursable school meals and other foods available throughout the school campus that meet or exceed Federal and state nutrition standards; **Students are given adequate time to obtain and consume meals** in an environment that encourages healthy eating...*

As currently configured, the high school lunch period scheduling at most SPS high schools in no way meets standards for equitable access or adequate time.

In 2016-17, SPS schools will switch to a new bell schedule, whereby high schools will start later than they currently do. To accommodate the current early starts and teens' typical biological predisposition to not wish to eat early in the morning, the NS department provides an opportunity for "second breakfast" in a number of its high schools. **Exhibit 2-18** provides data on the current meal schedule in these schools. In 2016-17, all SPS high schools will begin at 8:45, which is more than an hour later than the current start time for most. As shown, there is no apparent reason for having a second breakfast period at some schools but not others, except perhaps that:

- Garfield and Ingraham, which currently offer only a single lunch period for more than 1,000 students, have a second breakfast.
- The district's second largest high school, Ballard, offers only two lunch periods of 30 minutes each. With 1,713 in enrollment, the second breakfast appears to be a recognition that its lunch periods are insufficient.
- The three schools that currently start later than the rest do not offer a second breakfast.

Exhibit 2-18
High Schools With and Without Second Breakfast

School	Enrollment	Current Start Time	Current Second Breakfast Time	Length of Second Breakfast	Current Lunch Times	Current Lunch Length (Total)
With Second Breakfast						
Ballard	1,713	7:50	9:50-10:05	15	11:05-11:35 12:00-12:30	60
Franklin	1,307	7:35	9:35-9:45	10	10:55-11:35 11:50-12:30	80
Garfield	1,727	7:35	9:40-10:05	25	11:50-12:20	30
Ingraham	1,246	7:35	9:50-10:05	15	12:00-12:30	30
Rainier Beach	678	7:35	9:30-9:45	15	11:40-12:10 11:55-12:25	60
Without Second Breakfast						
Cleveland	840	7:35	None	NA	10:34-11:08 10:58-11:32	70
Hale	1,193	8:25	None	NA	12:20-12:50	30
NOVA	344	8:15	None	NA	11:30-12:15	45
Roosevelt	1,721	7:35	None	NA	10:45-11:15 11:45-12:15	60
Sealth	1,171	8:25	None	NA	11:40-12:10 12:40-1:10	60
South Lake	108	7:35	None	NA	12:08-12:38	30
West Seattle	1,009	7:35	None	NA	10:50-11:20 11:50-12:20	60

Source: SPS, March 2016

Management Recommendation

Adjust the high school meal program to accommodate the adjusted school bell times by eliminating second breakfast and adding those minutes to the lunch periods.

SPS should require its high schools to meet the intent of its Wellness policy and provide students with more equitable access, as well as adequate time to obtain and consume a lunch meal. The consulting team recommends that most minutes recouped from ending second breakfast be added to the lunch periods in the manner shown in **Exhibit 2-19**.

Exhibit 2-19
Recommended Lunch Schedule for Current Second Breakfast High Schools

School	Enrollment	Number of Lunch Periods	Length of Each Lunch Period	Total Lunch Length	Leftover Second Breakfast Time
Ballard	1,713	3	25	75	0
Franklin	1,307	4	22	88	2
Garfield	1,727	2	25	50	5
Ingraham	1,246	2	22	45	1
Rainier Beach	678	3	25	75	0

Fiscal Impact

This recommendation can be implemented with existing resources. No time should be reduced from cafeteria staffing as a result of this recommendation, although work schedules may need some adjustment.

Management Issue 2-4

Almost no elementary students have at least 20 minutes to eat lunch. This is contrary to best practices, the national trend, and district policy.

SPS Board Wellness Policy (3405) references the provision of "adequate time to obtain and consume meals" while SPS Policy H61.01 adopted in 2004 states, "Meal periods shall be long enough for students to eat and socialize – a minimum of 10 minutes are provided to eat breakfast and 20 minutes to eat lunch with additional time as appropriate for standing in line". When lunch periods are a total of 20 minutes in length it is not possible for the school to meet this requirement.

In 12 elementary cafeteria observations, the consulting team measured an average of 4.3 minutes for the last child in the serving line to select a meal and pay for it. That leaves just 15.7 minutes for that child to consume the meal. At one school, the consulting team recorded a maximum line wait time of eight minutes. These findings corroborate similar data provided in the University of Washington study in 2015. Further, in some cases, the consulting team observed elementary students hurrying through lunch in order to be released for recess.

SNA's *School Nutrition Operations Report, 2014*, provides comparative data in this area. Among large districts, the median elementary school lunch period was 30.0 minutes in 2014. All SPS elementary lunch periods are below this median.

In 2004, the National Food Service Management Institute (NFSMI, now the Institute of Child Nutrition) released a report detailing its findings about the relationship between meal scheduling and plate waste. The report details findings on two metrics: whether students have recess before or after lunch, and whether students have a 20-minute lunch period or a 30-minute lunch period. Regarding the length of the lunch period, plate waste was lower at schools that offered 30 minutes for students to eat their lunch versus those that offered only 20 minutes. NFSMI suggested that these data not only advocate for longer lunch periods but also remind child nutrition managers that students who must rush to eat their lunch tend to eat foods that are less healthy for them and to miss out on valuable social time with their

peers.[6]

In 2000, the USDA and five medical groups formed a partnership to address concerns about the increasing incidence of childhood obesity in the United States. One result of this partnership was the development of *Prescription for Change: Ten Keys to Promote Healthy Eating in Schools*, a guide for schools to improve students' diet and health. Of the 10 keys, the ones related to lunch periods are:

- *All students will have designated lunch periods of sufficient length to enjoy eating healthy foods with friends. These lunch periods will be scheduled as near the middle of the school day as possible.*
- *Schools will provide enough serving areas to ensure student access to school meals with a minimum of wait time.*
- *Space that is adequate to accommodate all students and pleasant surroundings that reflect the value of the social aspects of eating will be provided.*[7]

Management Recommendation

Provide all elementary students with a minimum of 20 minutes to eat lunch.

SPS should update its policy to require that all elementary students lunch periods are at least 25 minutes in length to allow time for eating, with some moving to 30 minutes. It is likely that the best time to make this change is in advance of the 2016-17 adjustment in school bell times.

Fiscal Impact

This recommendation can be implemented with existing resources. The impact on NS staffing expenditures will be small. Moreover, longer lunch periods could result in increased school meal participation.

Management Issue 2-5

Not all elementary students have recess before lunch. This is contrary to best practices.

SPS Policy HB 61.01, adopted in 2004, states "Schools are strongly encouraged to schedule recess time immediately prior to serving lunch." This policy lacks any form of requirement for recess before lunch. According to SPS staff, not all elementary students are scheduled for recess before lunch.

One of the most cited and discussed strategies for increasing student participation in school meal programs is the strategic scheduling of recess before lunch. Studies suggest that doing so allows students to expend energy that they will want to recoup by eating after playing. They also suggest that, when recess is scheduled *after* lunch, students often eat less to avoid

[6] National Food Service Management Institute. (2004). Relationship of meal and recess schedules to plate waste in elementary schools. *Insight – A Publication for Child Nutrition Professionals*, 24, 1-6.
[7] http://www.fns.usda.gov/sites/default/files/CalltoAction.pdf

lethargy at recess; thus, scheduling recess before lunch is a logical solution to that dilemma.

A 2015 study by researchers at Brigham Young University and Cornell University validates these theories. First through sixth grade students at several schools who switched to a recess-before-lunch schedule increased their participation in the meal program by 54 percent. The same students also saw a 46 percent increase in consumption of fruits or vegetables. Thus, the researchers recommend scheduling recess before lunch at all schools.[8]

In 2004, the National Food Service Management Institute (NFSMI, now the Institute of Child Nutrition) released a report detailing its findings about the relationship between meal scheduling and plate waste. The report details findings on two metrics: whether students have recess before or after lunch, and whether students have a 20-minute lunch period or a 30-minute lunch period. In schools that scheduled recess before lunch, plate waste averaged at 27.2 percent, while schools that schedule recess after lunch saw 40.1 percent plate waste. NFSMI suggested that students' preoccupation with going to recess in schools where recess comes after lunch prevents them from finishing much of their food, and they found that the food that *was* eaten tended to be high in protein and fat.[9]

In some districts that have made the switch to recess before lunch, concerns regarding handwashing between recess and lunch have been addressed by placing a handwashing sink near the entrance to the cafeteria or where students normally line up for lunch. **Exhibit 2-20** provides an example.

Exhibit 2-20
Example of a Handwashing Sink in a Cafeteria



Source: Prismatic archive photo

[8] Price, J., & Just, D. R. (2015). Lunch, recess, and nutrition: Responding to time incentives in the cafeteria. *Preventive Medicine,* 71, 27-30.
[9] National Food Service Management Institute. (2004). Relationship of meal and recess schedules to plate waste in elementary schools. *Insight – A Publication for Child Nutrition Professionals*, 24, 1-6.

Management Recommendation

Require recess before lunch for all elementary students.

SPS should update its policy to require that all elementary students have recess before lunch. It is likely that the best time to make this change is in advance of the 2016-17 adjustment in school bell times.

Fiscal Impact

This recommendation can be implemented with existing resources.

3 Staffing

This chapter addresses staffing of the Nutrition Services (NS) department in Seattle Public Schools (SPS) in the following sections:

A. Findings
B. Issues in Staffing

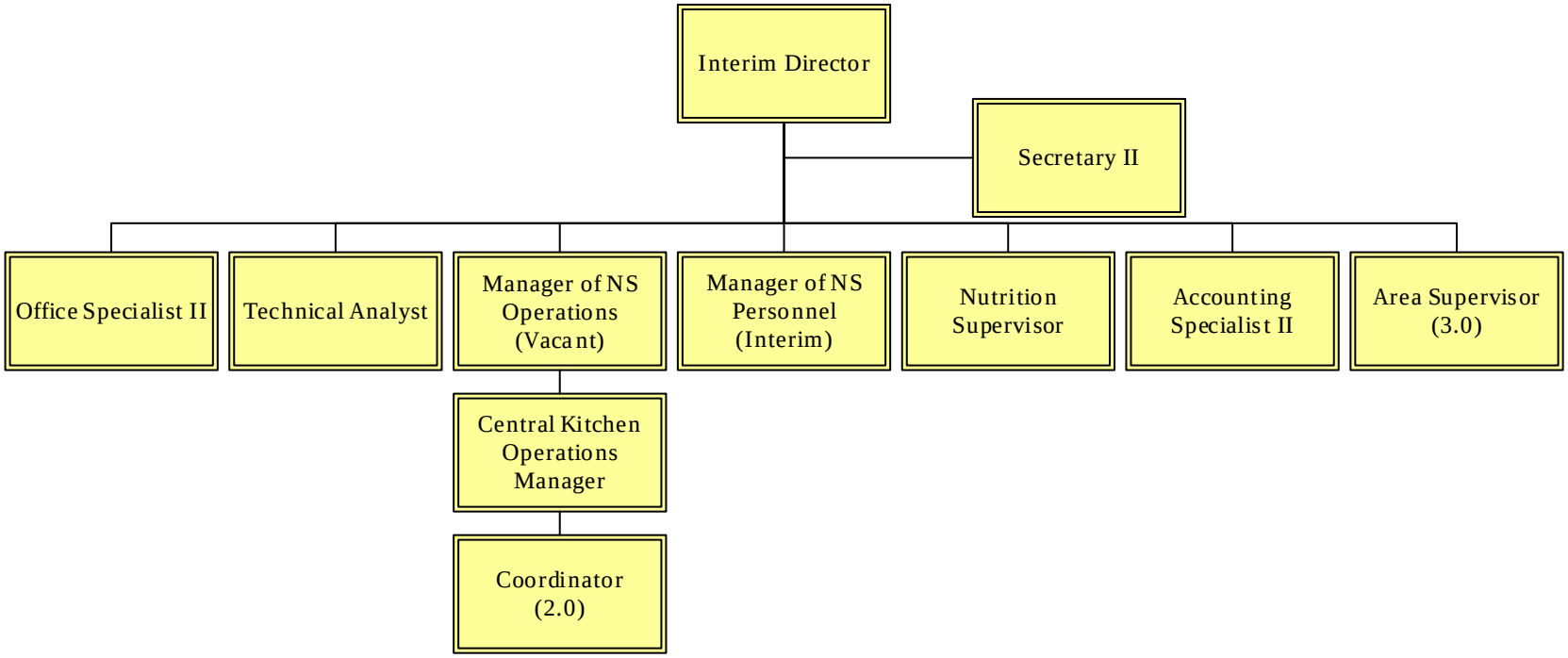
In any school meal program, one of the most critical tasks is effective and efficient staffing. Labor costs account for a sizeable portion of expenditures with an industry best practices target of 40-45 percent of revenue. The human resources functional area includes a number of subsystems that must be effective, efficient, and coordinated to ensure an optimal program operation. These subsystems include:

- recruitment;
- staffing levels;
- training;
- evaluation;
- disciplinary action; and
- organizational structure.

A deficiency in any one area leads to problems in all other areas.

The NS central office has a director and 10 employees, all of whom report to the director. All central office NS employees are evaluated by the director. NS reports to the SPS assistant superintendent of operations. Schools are staffed with a manager and assistants who report to the area supervisors. **Exhibit 3-1** shows the current organization chart for the NS central office.

Exhibit 3-1
Current NS Central Office Organization Chart



Source: NS, March 2016

A. Findings

Finding 2

The effectiveness of available training for CN staff could be improved. The NS department provides its employees with training opportunities, but several factors are contributing to an ineffectual training program. Deterrents such as location of classes and union contract provisions are resulting in a workforce that is not receiving training necessary for optimal job performance. The department is not meeting the requirements of the USDA Professional Standards, one of the components of the *Healthy Hunger-Free Kids Act* (*HHFKA*).

Several training classes are offered each month on a variety of topics. All these classes are held at the main administration building which is problematic due to difficulties finding parking and a lengthy drive from some schools. Focus group attendees noted these to be some of the reasons they did not attend. A beginning of school year training is held for all staff as well as an opening managers meeting. Meetings are scheduled for managers once a month. The purpose of these meetings and trainings is to provide updates and changes to the program operations. Information is presented that all staff is required to follow. Assistants and managers are paid to attend these meetings and trainings but are not required to attend, as per the negotiated contract. Area supervisors reported that approximately 20-30 of the secondary managers attend the managers meetings and approximately 30-40 of the elementary managers attend. The lack of required attendance is problematic as some employees are not receiving the necessary information and training for optimal job performance. An examination of the training schedules for past and the current year showed a great variety of classes were offered. However the perception held by a large number of employees, as indicated by focus group attendees, is that there is not enough training. They stated they want ongoing training that is kept updated and has variety.

There is no formalized training program for new employees or for current employees wanting to move to higher positions. New employees receive a district orientation but no classroom orientation of the national school meals program and the SPS operation specifically. Managers reported in focus groups that many new substitutes are not trained when they come to work in a kitchen and it is up to them to instruct them. Managers are not provided with materials to use in their on-the-job instruction for new hires to ensure that training is consistent and accurate. Focus group attendees stated they learned the duties of their positions while on-the-job and from other employees. Half stated they thought they were well trained and the other half indicated they were not. Assistants to be assigned as managers, are sent to a school to receive training from the manager. This training takes place during the normal work day and the manager is expected to perform the duties of their position as well as train. Managers at Gatzert, TOPS, and Maple train potential elementary managers for three days; Beach Court is used to train prepack managers for two days; and McClure is used for a three-day secondary manager training. As with new employee training, managers are not given training materials. Two to three days is insufficient for complete training on manager duties, recordkeeping and paperwork, and the software systems used.

Working in the kitchens preparing and serving school meals is challenging for several reasons. School kitchens contain institutional equipment that is unfamiliar to new hires, and misuse can lead to accidents. Because the child nutrition department operates the USDA programs, the department must comply with all regulations at the Federal and state levels, which are unfamiliar to new employees and to those seeking to advance to the manager level. The task of cooking for hundreds of students on a short schedule as opposed to preparing

home meals requires specialized training. The USDA programs are subject to internal and external audits, and failure to comply with federal, state, and local regulations can result in financial penalties to the district.

In 2010, as part of *HHFKA*, the USDA included a requirement titled "Professional Standards" that became effective July 2015. The purpose of the Professional Standards provision is to establish minimum continuing education standards for all school nutrition professionals that are the responsibility of the child nutrition department, as the employer. These training standards help ensure that cafeteria staff has the knowledge, training, and tools needed to plan, prepare, and serve nutritious meals to school students.

Exhibit 3-2 outlines the minimum training hours required for each employee group. The training must be job-specific, apply to the employee's work duties, and assist them in optimal performance of their assigned job duties. The regulation requires documentation to demonstrate compliance with the training requirements. Records must be available for state agency review and are now part of the Administrative Review. USDA provides a Training Tracking Tool on their website to assist districts with the recordkeeping requirement. Training records must be kept for three years plus the current school year.

Exhibit 3-2
Professional Standards Annual Training Hours Required

Position Type	2015-16	2016-17
Director	8 hours	12 hours
Manager	6 hours	10 hours
Staff (more than 20 hours per week)	4 hours	6 hours
Staff (less than 20 hours per week)	4 hours	4 hours

Source: USDA, January 2016

In addition to USDA requirements for training, the SNA, in their *Keys to Excellence: Standards of Practice for Nutrition integrity*, recommends as a best practice "Orientation and training that enhances learning and improves job skills is available to all school nutrition personnel".[1] Research shows that an effective orientation for new hires and ongoing training for existing staff reduces staff turnover, increases productivity, and boosts morale.

Recommendation

Improve the effectiveness of staff training by:

- **offering regional training at convenient times;**
- **requiring manager attendance at regional meetings;**
- **formalizing orientation training for new employees (including classroom and skills development);**
- **formalizing orientation training for employees moving to higher positions (including classroom and skills development, creating a career ladder); and**

[1] http://www.schoolnutrition.org/Content.aspx?id=20206

- **offering sufficient classes to meet the Professional Standards requirement.**

All training classes should be held in schools around the city to ensure availability of parking and ease of driving distance. The same classes should be offered in all designated regions so all employees have the same opportunities. Managers meetings should be held in schools within each area supervisor's area and all meetings should be regional. The union contract should be amended to include a requirement for all employees to attend beginning of year meetings, monthly manager's meetings, and any other required training meetings. Class offerings should be organized to ensure the USDA Professional Standards requirements are met.

The department should develop an orientation program for new employees to include classroom training and on-the-job training. Drafts of training materials should be given to a select team of kitchen managers and workers for feedback and suggestions. The classroom portion should include topics that a new employee should know in advance of entering a school kitchen for on-the-job training. Topics should include:

- department vision, mission, and goals;
- history of school meals and general overview of the USDA program;
- facts about SPS and the district's school meals program;
- types of school meals and service offered;
- menus, meal patterns, components, portions, delivery (offer versus serve);
- sanitation, food safety, Hazard Analysis Critical Control Point (HACCP);
- kitchen equipment, large and small;
- customer service;
- job requirements; and
- testing at the end of the training to evaluate the knowledge gained.

A similar classroom orientation should be developed for those assistants moving to manager positions. Mangers should be surveyed to help develop an appropriate list of topics assistants should know before starting their on-the-job training. At a minimum, topics should include:

- how to complete required bookwork;
- ordering and inventory;
- employee discipline;
- marketing and customer service; and
- how to use the automated software and POS.

Materials should be developed for the training managers to use in the on-the-job portion of training for both new substitutes and assistants to ensure consistency and that all topics are covered. A checklist should be used that both manager and employee sign upon completion of each area.

In implementing this recommendation, the department could organize classes that workers would take to advance their skills. Completing these classes with a passing grade would be given extra weight when applying for promotions. The classes would be regional and taught by area supervisors after the workday. Topics could include:

- Orientation for New Hires – classroom and in the kitchen after the workday, required of all new hires;
- Basic Food Preparation (cooking and baking);
- Salad Bar Preparation and Set-Up;
- Customer Service;
- Cashier and POS – must complete this class to be assigned to cashier position; and
- New Manager Training– must complete this class to be assigned to floater manager or manager.

Finally, area supervisors should be tasked with tracking the training hours of the cafeteria staff they supervise. Completion of professional development hours in accordance with *HHFKA* should be part of each employee's annual evaluation.

Fiscal Impact

This recommendation can be implemented with existing resources. The ICN offers a number of online, free resources. All have downloadable materials and self-paced. The consulting team recommends these online ICN classes:

- Batch Cooking;
- Focus on the Customer;
- Food Service Assistant You are Important;
- Culinary Techniques (several available); and
- Hot and Cold Temperatures.

Another free resource is "No Time to Train – Short Lessons for School Nutrition Assistants." This is a series of 34 lessons running 10 to 20 minutes each and designed to be given by an instructor without electronic equipment. They could be given by managers to their staffs in the kitchen environment. Topics include a variety of food preparation and serving, safety and accident prevention, equipment usage, and customer service, among others.

Finally, the ICN offers longer classes on its website that take between six and 12 hours to complete. These would require a trainer. The most appropriate topics would be Focus on the Customer and Practical Skills for Preparing Quality Meals: A Five Step Process.

B. Issues in Staffing

Management Issue 3-1

The efficiency and effectiveness of the NS central office could be improved with reorganization. There are several factors contributing to the central office not performing at an optimal level.

Central office vacancies are not being posted and filled in a timely manner. Several positions are filled in the interim by existing staff. This includes the director position, filled by an interim director for seven months. The manager of operations position has been vacant for three months. A third position, office specialist, has been posted. These vacancies have resulted in other central office staff assuming additional duties for which they may not feel qualified and resulting in a lack of sufficient time to complete all assigned duties in a timely manner. Focus groups with managers and staff as well as central office interviews all indicated these vacancies to be a major problem that has compromised the usual level of service and efficiency.

There is limited financial data analysis of the program at the central level or at the school level. No reports are prepared showing financial or participation data at the individual school level. Area supervisors and site managers are not aware of the financial status of their individual operations. This knowledge is crucial to revenue maximization and cost controls for which they are responsible. The accounting specialist position performs a variety of financial activities at the level of recording, tabulating, or updating fiscal information but no analysis of the data. Many of the budget and financial analysis functions are performed for NS by the district budget and accounting departments. The NS department would benefit from shifting most of the duties of the accounting specialist position to the office specialist and hiring an accountant.

Many of the purchasing functions are performed by the district's purchasing department. The interim director stated NS used to have a procurement specialist but the position was eliminated due to budget cuts. New USDA procurement rules for child nutrition programs became effective October 2015. The complexity of the school meals program and the many USDA regulations governing specifications and purchasing would warrant a return to all procurement functions being performed by a NS procurement specialist.

The NS supervisors are currently contracted to work only 223 days per year. This means that they cannot spend the summer period working on new initiatives, readying the district for the upcoming school year, or supporting summer meals programs. In comparison, all of Spokane's supervisors are 260-day positions. In Edmonds, the operations manager is a 260-day position.

The span of control for the area supervisors is too large. In addition to directly supervising a number of schools (ranging from 20 to 25), each is also responsible for any number of additional duties such as marketing, planning, training, teaching classes, holding manager's and staff meetings, overseeing the department safety and sanitation program, nutritional analysis, and developing special menus. In interviews, there was agreement that the work load was heavy. When questioned as to what tasks were not completed when there was a shortage of time, the response was school support. The current lack of substitutes has exacerbated this problem as area supervisors are spending a large portion of their time working in schools. Best practice staffing guidelines recommend one supervisor for every 20 schools (**Exhibit 3-3**). Staffing according to this guide would result in increasing area

supervisors by one position. Best practices in staffing also call for an assistant director position.

Exhibit 3-3
Administrative Staffing Guidelines

Number of Schools	Director	Assistant Director	Supervisory Staff
Up to 10	1		
11-20	1		1
21+	1	1	1 for every 20 schools

Source: School Food & Nutrition Service Management Sixth Edition, 2014

The district would benefit from revising the manager of operations position to an assistant director to provide a more appropriate span of control for the director. The job description would need to be reviewed and revised to accommodate updated duties.

In the central kitchen area, while the spans of control are adequate, the management structure is not. The central kitchen manager is a part of the Local 609, despite the fact that the central kitchen lead and coordinator are also part of the union and provide the direct supervision of the kitchen staff. There are problems with discipline when all are part of the same bargaining unit. The central kitchen manager is a position similar in nature to those of the NS area supervisors, who are part of the district's management staff. The central kitchen manager's salary is also commensurate with a management position.

There are 11 school districts in Washington with more than 20,000 students enrolled, including Seattle. The consulting team requested central office staffing data from the 10 peer districts and received data back from three. **Exhibit 3-4** provides the job titles of all central office nutrition services positions in those three. As shown, SPS, with much higher student enrollment and only 14 positions, is not staffing its NS department to the same level.

Exhibit 3-4
Central Office Staffing of Peers

Peer District	Enr.	Position	Number	FTE
Spokane	29,446	Director	1	12
		Secretary	4	
		Office Manager	1	
		Supervisor	4	
		Quality Assurance Trainer	1	
		Accountant	0.5	
		Tech Support Meal And BOH Software	0.5	
Edmonds	20,817	Director	1	5.25
		Operations Manager	1	
		Field Supervisor	1	
		Office Coordinator	1	
		Accountant Specialist	1	
		FRP Meal Application Processor	0.25	
Kent	27,681	Director	1	10
		Central Kitchen Manager	1	
		Assistant Central Kitchen Manager	1	
		Dietitian	1	
		Elementary Field Assistant	2	
		Secondary Field Assistant	1	
		Admin Assistant	3	

Source: Compiled by Prismatic from peer district responses to emails, March 2016

A central office serves to provide the mechanism for coordinating and integrating all activity toward the achievement of defined objectives. The organizational design of the office plays a major role in how effectively it performs and whether it is able to achieve the objectives of its operation. Typically, various activities are formed into subsystems such as:

- purchasing;
- financial;
- human resources;
- management of the free/reduced program;
- training;
- record keeping and report development;
- marketing;
- menu development and nutritional analysis; and
- strategic planning.

This division of labor and specialization results in strong departmental organization. The duties of each subsystem should be assigned to just one person if at all possible (with someone else trained as a backup). For example, all meal application processing is assigned to one person.

Spears (1991) discusses departmentalization in *Foodservice Organizations: A Managerial and Systems Approach*[2]. She states:

> *Departmentalization, which involves grouping activities into work units, is the most frequently used method for implementing division of labor. Although these work units can be structured in a number of ways, they all divide the work and thus establish a pattern of task and authority relationships.*

Management Recommendation

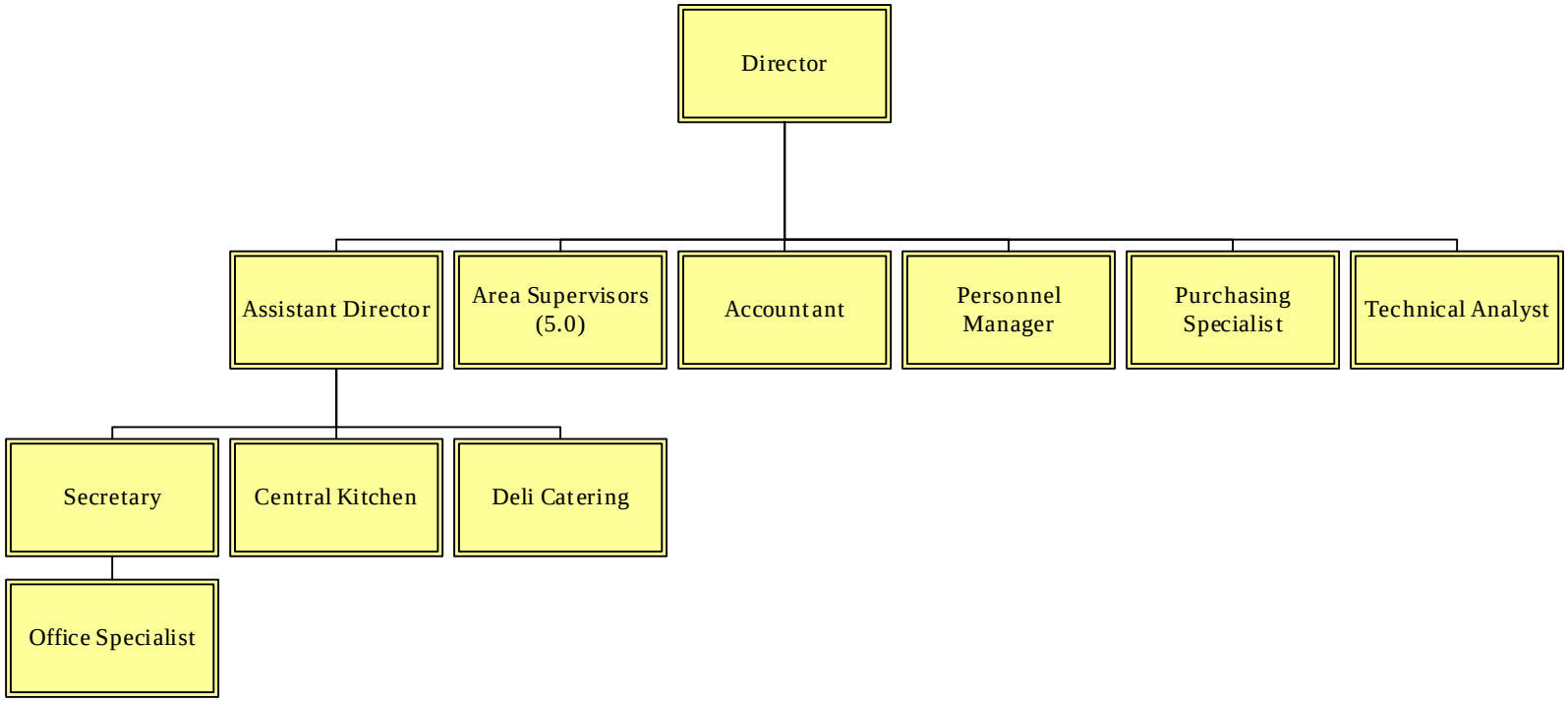
Reorganize the central office by:

- **adding one supervisor position;**
- **increasing all supervisor positions from 223 to 260 days per year;**
- **reclassifying the central kitchen manager position from a union to a management position;**
- **adding one purchasing position;**
- **revise the accounting specialist position to an accountant to focus on a higher level of financial and data analysis; and**
- **revising the manager of operations position to an assistant director to provide a more effective span of control for the director.**

Exhibit 3-5 shows a recommended revised organizational chart for the central office that will result in a more efficient and effective organization. It includes an additional area supervisor, an accountant, a procurement specialist, and an assistant director. With the revision of duties, the accounting specialist and manager of operations positions are eliminated, resulting in only two additional staff.

[2] Spears, Marian C. (1991). *Foodservice Organizations: a managerial and systems approach 2nd edition*. New York, New York: Macmillan Publishing Company.

Exhibit 3-5
Recommended NS Central Office Organization Chart



Source: Prismatic, March 2016

In addition to reorganizing the central office organization, all vacant positions need to be filled in a timely manner. No organization can operate effectively when top leadership positions are not filled. The consulting team recommends that a consultant be hired immediately for a period of one year to fill the position of the director allowing time to evaluate the job description, salary, and perform the functions of posting, screening, hiring, and orientation. The consultant should be expected to serve as a mentor for the assistant director. This consultant should also be expected to begin implementation of recommendations made in this report for improving the general operations of NS.

Fiscal Impact

Information from the interim director indicated the assistant director position was paid at the same grade as the manager of operations when the change was made several years ago. Therefore, this recommended change would not result in any fiscal impact.

Reclassifying the central kitchen manager to a non-union position can be accomplished with existing resources.

The NS supervisors are currently paid on the district's MS3 Management Scale. Implementing this recommendation would move them to the MS1 Management Scale. Increasing the number of days supervisors work from 223 to 260 would require approximately a 16 percent increase in salary. Based on the current salary scales, that would require approximately $8,000 per year per supervisor.

Salaries for the positions of accountant and procurement specialist were estimated to be in the same range as the technical analyst ($50,648). The salary difference between the accountant and the accounting analyst was estimated to be $15,996. Total additional costs from this recommendation is $117,292 ($50,648 +$50,648+$15,996).

Management Recommendation	2016-17	2017-18	2018-19	2019-20	2020-21
Upgrade supervisor positions to 260-day contracts.	($40,000)	($40,000)	($40,000)	($40,000)	($40,000)
Hire an Area Supervisor, a Procurement Specialist, and an Accounting Specialist.	($117,292)	($117,292)	($117,292)	($117,292)	($117,292)

Management Issue 3-2

There is limited supervision and monitoring of kitchen operations. The supervisors put forth great effort, but their current responsibilities stretch them too thin to provide effective supervision of their schools. Their intent is diluted due to the fact that the majority of their time is spent as a substitute assistant or manager.

During interviews, supervisors were asked how often they visit each of their schools to supervise. Responses ranged from only 25 of the last 110 days to once since the beginning of the school year. They stated they take pride in being a resource for staff and want to give them more support. Several stated they had not yet completed the required USDA onsite review of each of their schools which was due by February 1st. Focus groups with managers and staff indicated their area supervisor made a site visit once this year compared to two to

three times last year. Some managers stated it would be helpful if their area supervisor came more often. The NS interim director stated her expectation is that they spend 80 percent of their time in the field monitoring and supervising schools. The widespread difference in frequency of supervisory visits and expectations to actual behavior is due to a shortage of substitutes resulting in area supervisors spending the majority of their time filling in for vacancies.

Each area supervisor has been assigned 20-25 schools or an average of 23. Applying the 80 percent expectation rate, supervisors should be spending approximately six hours per day in the field monitoring their schools. If supervisors visit two schools per day, it would take 2.5 weeks to visit all schools resulting in some being visited twice a month and others only once per month. Their workday would also include time spent in travel between the central office and the schools. While potentially manageable, this scenario does not allow time for such activities as more deeply training new cafeteria managers, preparing cafeterias for compliance reviews, or holding school-level staff meetings to solicit new ideas.

The Institute of Child Nutrition (ICN) has determined the competencies, knowledge, and skills needed for positions at various levels in the operation of school meals programs. At the district level, ICN documentation states that directors and supervisors:

> *are hired by school districts to oversee district-wide foodservice operation and their responsibilities include planning, administering, implementing, monitoring, and evaluating all aspects of the SN program to ensure that school meals are nutritious, age-appropriate, appealing, and cost effective.*[3]

The importance of supervisors doing monitoring and evaluation is clearly noted as a result of this research. In its Keys to Excellence self-assessment tool, the SNA states the following best practice in the area of program accountability, "A system for internal audits and reviews is established to evaluate the performance of the school nutrition program and identify and control problems".

In her seminal textbook *School Foodservice Management*, VanEgmond Pannell (1990) discusses the role of the director or supervisor. She states, "A supervisor is responsible for evaluating programs, aiding the foodservice manager, and generally directing the individual foodservice units".[4]

Cafeteria managers and staff should have frequent supervision and strong support from central office staff. The importance of monitoring and oversight cannot be underestimated as child nutrition programs in schools are Federal (USDA) programs and operate under myriad laws with comprehensive regulations and requirements. Cafeteria managers are responsible for ensuring that all regulations are being followed and students' nutritional needs are being met. Infractions can results in fiscal penalties. Child nutrition operates as an enterprise within the school district with fiduciary responsibility to manage public funds in an accountable manner. Cafeteria managers play a key role in ensuring the financial success of the department as they influence many of the expenditures and all of the revenue streams. Their important role in the success of the program warrants frequent oversight and

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[3] Nettles, M. F., Asperin, A., & Carr, D. (2010). *Competencies, Knowledge, and Skills for District-Level School Nutrition Professionals in the 21st Century*. University, MS: National Food Service Management Institute.

[4] VanEgmond Pannell, D. (1990). *School Foodservice Management* (4th ed.). Van Nostrand Reinhold.

evaluation by the supervisory level staff to ensure the goals and regulations of the program are being met.

In school visits, the consulting team found several instances of inconsistent application of standards in production and serving. At some schools, students at the end of a serving period did not have the same choices as those at the beginning due to the practice of making a set number of servings of an item for each period. Staff in other schools made an effort to prepare more of an item during a period to ensure all students had the same choices. Staff in some schools exhibited poor customer service while many others showed excellent interaction with students. Some schools heated up left overs for meals and others indicated they were not allowed to serve left overs. As recorded by the consulting team:

- 58 percent of schools observed were not practicing batch cooking;
- 27 percent of the cafeteria staff did not appear well trained for their current job duties;
- 24 percent of last students did not have the same meal options as the first student; and
- 27 percent of the schools were serving foods that did not match the menu.

These examples of inconsistency and a lack of adherence to standard procedures for preparation and serving are indicative of infrequent monitoring and oversight.

Management Recommendation

Improve monitoring and oversight of the schools by the area supervisors.

Efforts to increase the substitute pool are necessary to ensure schools are receiving effective monitoring and oversight by the area supervisors. The department needs consistent, high expectations for how often supervisors visit each kitchen. The main focus of the supervisor's day should be to monitor school operations in at least one school every day. Supervisors should use a tablet-driven application/form for assessing kitchen performance during each visit. This will provide a record of school visits for follow-up as well as provide the director a snapshot of operations at the school level. Twice a year area supervisors should perform a more in depth assessment of each of their schools to evaluate the kitchen operations. Areas to be assessed should include:

- food preparation methods and quality;
- HACCP procedures, food safety and sanitation;
- cleanliness of kitchen and storeroom;
- proper use of equipment;
- meal service procedures (breakfast and lunch), portions, menu selections, plate waste;
- cashiering, and POS procedures, money counting;
- preparation of reports, ordering, and inventory;

- customer service;
- condition of equipment and physical facility; and
- chemical usage and storage.

The checklist should include a section to note any corrective action needed. After the evaluation, the checklist should be discussed with the manager and a plan should be determined to address any areas needing follow-up. The department should maintain an adequate pool of assistant and manager substitutes to ensure area supervisors are not being used to fill in for vacancies so they can perform the monitoring and oversight duties as outlined on their job descriptions.

Fiscal Impact

This recommendation can be implemented with existing resources.

Management Issue 3-3

The employee evaluation process is not effective at identifying and disciplining poor performers. As a result, some staff do not take the performance appraisal process seriously and managers and area supervisors are reluctant to identify performance issues that should be addressed. Poor performing employees are not receiving the feedback and assistance they need to improve their performance and skills.

NS has developed an excellent performance appraisal form and accompanying criteria for job appraisal guidance. However, the process to accurately identify substandard performance has become ineffective for several reasons. As stated in focus groups, managers who identify poor performance feel they are not supported in their efforts to start the disciplinary process. Area supervisors reported they also are reluctant to address performance issues with assistants and managers for the same reasons. Interviews with central office staff indicated managers have expressed an awareness of poor performance with some of their staff, but are reluctant to address, and some are even afraid to do so, because they are in the same union and have to continue to work with the employee. Employees stated that the process has led to a climate where no one takes the job appraisal process seriously.

In the current process, employees are ranked from 1 (lowest) to 5 (highest) in eight areas. The area of attendance only has two possible options 0 (fail) or 5 (pass). For the other seven areas, the Criteria for Job Appraisal clearly states when a ranking of 1 is to be given. A score of 1 is to be used when an assistant:

- fails to meet the stated criteria;
- refuses to follow or comply with USDA or health department regulations;
- does not respond to requests from student customers; or
- demonstrates a strong disregard for district/department policy.

A score of 1 is to be used when a manager is in non-compliance in areas including but not limited to:

- failure to attend training;
- not carrying out supervisory responsibilities;
- not completing assigned administration duties;
- failure to write up marketing plans;
- being unwilling to assist others.

An assistant or manager can be given a 1 ranking in one or more areas yet might not be put on a work improvement plan or progressive discipline plan. This is due to the practice of only putting an employee on probation if they receive a total score of 26 or less. This practice has diluted the appraisal process significantly as any infraction meriting a 1 score should automatically result in a plan for improvement as they are serious offenses. It has also led to a weakened chain of command between employees, managers, and area supervisors.

The ICN has developed numerous training materials based on research and best practices that address performance appraisals. Their *Competency-Based Performance Appraisals for School Nutrition Managers and Assistants/Technicians* states the following objectives of performance appraisals:

- maintain desired performance;
- improve performance;
- communicate future expectations;
- collect information to aid in effective, fair employment decisions; and
- maximize the growth potential of the employee.

The ICN recommends that an effective performance appraisal form should have the following qualities:

- criteria clearly defines expected performance;
- a rating scale appropriately reflects criteria;
- clear instructions;
- a user-friendly format;
- space for comments; and
- a plan for improvement.[5]

The ICN further states that performance ratings should be as follows:

- **below standard** – fails to perform the minimum requirements of the job and immediate improvement is necessary;

[5] http://www.theicn.org/ResourceOverview.aspx?ID=259

- **needs improvement** – standards for all competencies are met but performance is weak or inconsistent and improvement is needed in a specific competency;
- **meets standard** – performs all job requirements satisfactorily;
- **area of strength** – meets all job requirements and performs above standard for a specific competency; and
- **exceeds standard** – consistently surpasses job standards to improve personal performance and advance the school nutrition program.

As ICN states "Evaluating performance is essential for employee growth and program improvement. Using the appropriate performance appraisal process and forms will facilitate effective assessment that contributes to achieving organizational goals".[6]

Management Recommendation

Improve the employee evaluation process so that poor performers can be identified and disciplined, as needed.

NS should discontinue the practice of not putting employees on an improvement plan unless they receive a score of 26 or less on their performance appraisal. A score of 1 in any area should be considered a serious infraction warranting a plan for improvement for the employee that addresses the following:

- description of the specific performance behavior that is in non-compliance;
- description of the desired performance behavior;
- timeline for improved performance; and
- consequences of failure to improve.

A progressive discipline process should be developed and used for poor performance. Local 609 and the NS department should prepare a joint presentation to all staff that outlines the new evaluation process, the progressive discipline process, and the seriousness of employee non-compliance in any area. Managers and area supervisors should be given the authority and support to address employee performance issues. Every effort should be made to change employees' perception that poor performance is tolerated and will not be addressed.

Fiscal Impact

This recommendation can be implemented with existing resources.

Management Issue 3-4

The district is not allocating labor hours based on industry best practices. A memorandum of understanding between SPS and Local 609 outlines nutrition services meals per labor hour protocol. Guidelines for calculations of meal equivalents and goals for

[6] http://www.theicn.org/documentlibraryfiles/PDF/20081124111144.pdf

MPLH by school levels are clearly stated. There are several differences between industry standards and those established for SPS Nutrition Services.

The most common means of measuring employee productivity in child nutrition is the Meals per Labor Hour (MPLH) measure. This is calculated by dividing the number of meal equivalents produced and served in a day by the number of labor hours required to produce and serve those meals.

A meal equivalent is the rate used to compare the amount of labor needed to prepare one lunch with labor needed to prepare breakfasts, snacks, or a la carte. The student reimbursable lunch meal is the standard unit of conversion for determining meal equivalents. School lunch is used as the basis of comparison because it is the main source of revenue and it takes the most time to prepare. Therefore, all meal types are converted to meal equivalents for the purposes of measurement. A meal equivalent is not a unit of production but a calculation that allows a school nutrition program to equate all meals and a la carte sales to a standard. A la carte revenue is converted to a meal equivalent by dividing total revenue by a standard.

The director of the Child Nutrition Unit of the Office of Superintendent of Public Instruction (OSPI) stated they use the standards as developed by the ICN when figuring meal equivalents and do not recommend any state-specific guidelines for MPLH. The ICN uses the following conversion formulas when calculating meal equivalents:

- one lunch equates to one meal equivalent;
- three breakfasts equate to two meal equivalent;
- three snacks equate to one meal equivalent;
- one supper equates to one meal equivalent; and
- a la carte equivalents = a la carte revenue ÷ (current free lunch reimbursement + current USDA foods value per lunch).

SPS Nutrition Services uses a similar approach to calculating meal equivalents but it is not completely the same. In the memorandum of understanding, breakfast equivalents are calculated at the rate of two equaling one lunch and snacks at the rate of four equaling one lunch. According to staff, these conversions were negotiated prior to the OSPI adopting the ICN standards. The memorandum goes on to state the resulting MPLH is then compared to a departmental goal and is used to evaluate productivity. Goals are:

- secondary 25 MPLH
- elementary (bulk) 30 MPLH
- elementary (pre-pack) 42 MPLH

Industry best practice guidelines for MPLH staffing are shown in **Exhibit 3-6**. This chart provides MPLH guidelines and total recommended hours for both satellite schools and finishing kitchens. The consulting team found NS to be using both bulk cold and pre-plated types of preparation systems. The pre-plated frozen category most closely matches the method used in SPS. These guidelines provide a recommended range of labor hours for each number segment of meal equivalents.

Exhibit 3-6
Staffing Guidelines for Satellite Schools and Finishing Kitchens

Number of Meal Equivalents (MEQ)	MPLH and Number of Labor Hours by Type of Preparation System				
	Bulk Cold (FK)*	Bulk Hot (FK)	Pre-Plated Cold (BAG)	Pre-Plated Frozen**	Pre-Plated Hot
	MPLH	MPLH	MPLH	MPLH	MPLH
Up to 75	16-20	17-22	75-80	30-35	50-55
76-100	18-23	19-23	75-80	30-35	50-55
101-200	20-25	21-26	100-110	50-55	75-80
201-300	22-27	24-29	100-110	60-65	75-80
301-400	26-31	26-31	100-110	60-65	75-80
401-500	26-31	28-33	100-110	60-65	75-80
501-700	28-33	30-35	100-110	60-65	75-80
701 up	30-35	32-37	100-110	60-65	75-80

**Needs heating, portioning, and serving.*
***Needs heating and serving.*
Source: School Food & Nutrition Service Management Sixth Edition

In addition to developing these staffing guidelines, the author states "there are no magic formulas that can be applied to staffing all foodservices".[7] The number of employees needed and the labor hours will be influenced by a number of factors, including:

- type of food production system (on-site production, bulk satellite, pre-plated, satellite, assembly-serve, etc.);
- level of service (self-service, vending machines, plates served on serving line, made-to-order service);
- menu (number of choices, difficulty, or complexity);
- degree of prepared foods purchased (raw ingredients, some convenience foods, or all convenience foods);
- type of equipment (amount of automation or lack of);
- layout and design of kitchen and serving area;
- production planning (work schedules);
- staffing and scheduling;
- training and skill levels of employees;
- motivation of employees;
- size of facility (number of customers, volume of sales); and

[7] Pannell-Martin, D. & Boettger, J.A. (2014). *School food and nutrition management of the 21st century*.

- schedule of serving periods.

Financial Management: A Course for School Nutrition Directors[8] also recognizes staffing to be a complex process and recommends establishing a desired goal that includes a range of acceptable MPLHs to accommodate all the many factors, besides participation, that can affect productivity. For example, schools with older equipment and a poor layout could be staffed to work at the lower end of the acceptable MPLH range.

The formula used by SPS nutrition services contains many of the same basic elements recommended as industry best practices and used by the majority of school nutrition programs around the nation with the exception of using a range of MPLH based on industry standards. Setting goals using a range allows accommodation for the widely different meal equivalents in the secondary and elementary schools and is a more equitable process of assigning labor hours. **Exhibits 3-7** show calculations of MPLH using industry standards which utilize a range system. An analysis of data using the SPS method indicates that 80 to 90 percent of the kitchens have an excess of labor hours. In contrast, using the recommended system, only 40 to 55 percent of the kitchens have excess labor hours. The effect of calculating meal equivalents in the manner recommended by OSPI is not considered in this exhibit.

[8] National Food Service Management Institute. (2010). *Financial management: A course for school nutrition directors*. University of Mississippi.

Exhibit 3-7
Productivity Results Using MPLH Industry Standards

School	2015-16 (SEP through JAN)					2014-15				2013-14			
	Average Daily ME	Ave. Assigned Hours	Average MPLH	Standard Range	Under/ Over/ Within Standard	Average Daily ME	Ave. Assigned Hours	Average MPLH	Under/ Over/ Within Standard	Average Daily ME	Ave. Assigned Hours	Average MPLH	Under/ Over/ Within Standard
High													
Ballard	248	17.0	14.6	22 - 27	Under	283	17.0	16.7	Under	333	17.5	19.0	Under
Cleveland	399	19.5	20.5	26 - 31	Under	428	19.5	21.9	Under	465	21.0	22.2	Under
Franklin	483	22.5	21.4	26 - 31	Under	501	22.5	22.3	Under	526	24.5	21.5	Under
Garfield	378	22.0	17.2	26 - 31	Under	415	22.0	18.9	Under	485	22.0	22.0	Under
Hale	283	14.5	19.5	22 - 27	Under	268	14.5	18.5	Under	310	15.0	20.7	Under
Ingraham	271	14.5	18.7	22 - 27	Under	280	14.5	19.3	Under	283	16.0	17.7	Under
NOVA	84	3.0	28.0	18 - 23	Over	59	3.0	19.7	Within	45	2.0	22.3	Over
Rainier Beach	271	12.0	22.6	22 - 27	Within	284	11.1	25.6	Within	245	9.5	25.7	Within
Roosevelt	178	13.0	13.7	20 - 25	Under	218	13.0	16.8	Under	237	13.0	18.2	Under
Sealth	586	25.0	23.4	28 - 33	Under	578	25.0	23.1	Under	569	25.0	22.8	Under
South Lake	35	4.0	8.7	16 - 20	Under	49	4.0	12.1	Under	54	4.0	13.4	Under
West Seattle	180	13.0	13.8	20 - 25	Under	220	13.0	16.9	Under	249	13.5	18.5	Under
Seattle World School	297	13.8	21.5	22 - 27	Under	298	12.0	24.8	Within	301	11.0	27.4	Within
Middle													
Aki Kurose	557	26.5	21.0	28 - 33	Under	585	25.9	22.6	Under	618	25.0	24.7	Under
Denny	594	25.5	23.3	28 - 33	Under	639	24.6	26.0	Under	607	23.5	25.8	Under
Eckstein	176	14.9	11.8	20 - 25	Under	197	17.0	11.6	Under	397	18.0	22.1	Under
Hamilton	198	11.0	18.0	20 - 25	Under	197	11.0	17.9	Under	250	11.0	22.7	Within
Jane Addams	260	12.0	21.7	22 - 27	Under	258	13.5	19.1	Under	240	9.0	26.6	Within
Madison	316	14.0	22.6	26 - 31	Under	319	14.3	22.3	Under	316	16.5	19.1	Under

School	2015-16 (SEP through JAN)					2014-15				2013-14			
	Average Daily ME	Ave. Assigned Hours	Average MPLH	Standard Range	Under/ Over/ Within Standard	Average Daily ME	Ave. Assigned Hours	Average MPLH	Under/ Over/ Within Standard	Average Daily ME	Ave. Assigned Hours	Average MPLH	Under/ Over/ Within Standard
McClure	196	12.5	15.7	20 - 25	Under	192	12.5	15.3	Under	204	12.5	16.3	Under
Mercer	666	29.0	23.0	28 - 33	Under	727	27.8	26.1	Under	656	30.0	21.9	Under
Washington	590	24.2	24.4	28 - 33	Under	610	24.5	24.9	Under	631	28.5	22.2	Under
Whitman	217	15.5	14.0	22 - 27	Under	278	15.5	17.9	Under	355	14.5	24.5	Under
Elementary/K-8													
Adams	132	5.0	26.5	20 - 25	Over	139	5.0	27.9	Over	127	5.5	23.0	Within
Alki	112	5.5	20.4	20 - 25	Within	131	5.5	23.7	Within	123	5.5	22.3	Within
APP @ Lincoln				-		109	5.0	21.8	Within	88	3.5	25.2	Over
Arbor Heights	156	5.0	31.3	20 - 25	Over	150	5.0	30.1	Over	183	6.5	28.1	Over
Bagley	87	3.5	24.8	30 - 35	Under	93	3.5	26.6	Under	83	3.5	23.7	Under
Beacon Hill	338	13.0	26.0	26 - 31	Under	359	13.0	27.6	Within	373	13.0	28.7	Within
Blaine	150	5.0	30.1	20 - 25	Over	152	5.0	30.3	Over	115	5.0	23.0	Within
Broadview	362	16.0	22.6	26 - 31	Under	427	16.0	26.7	Within	455	16.0	28.5	Within
Bryant	177	7.5	23.6	20 - 25	Within	198	7.5	26.4	Over	212	7.5	28.3	Over
Cascadia @ Lincoln	129	5.0	25.7	20 - 25	Over								
Coe	76	4.5	16.9	18 - 23	Under	93	4.5	20.6	Within	108	4.5	24.1	Within
Concord	383	15.5	24.7	26 - 31	Under	445	15.8	28.2	Within	462	16.5	28.0	Within
Day	120	5.5	21.7	20 - 25	Within	127	5.5	23.0	Within	138	5.5	25.0	Over
Dearborn Park	318	11.5	27.7	26 - 31	Within	339	11.8	28.8	Within	352	12.5	28.2	Within
Dunlap	345	15.0	23.0	26 - 31	Under	433	15.0	28.9	Within	430	15.5	27.7	Within
Emerson	348	11.5	30.2	26 - 31	Within	328	10.9	30.1	Within	301	11.0	27.3	Over
Fairmont Park	109	4.7	23.1	20 - 25	Within	135	5.8	23.5	Within				
Gatewood	152	8.0	19.0	20 - 25	Under	167	8.0	20.8	Within	212	8.0	26.5	Within
Gatzert	366	14.5	25.2	26 - 31	Under	404	14.5	27.8	Within	418	14.5	28.8	Within

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School	2015-16 (SEP through JAN)					2014-15				2013-14			
	Average Daily ME	Ave. Assigned Hours	Average MPLH	Standard Range	Under/ Over/ Within Standard	Average Daily ME	Ave. Assigned Hours	Average MPLH	Under/ Over/ Within Standard	Average Daily ME	Ave. Assigned Hours	Average MPLH	Under/ Over/ Within Standard
Graham Hill	264	10.0	26.4	22 - 27	Within	286	10.0	28.6	Over	301	10.0	30.1	Within
Green Lake	63	3.5	18.1	30 - 35	Under	61	3.5	17.5	Under	57	3.5	16.2	Under
Greenwood	109	5.5	19.9	20 - 25	Under	133	5.5	24.2	Within	152	5.5	27.6	Over
Hawthorne	283	10.0	28.3	22 - 27	Over	295	10.3	28.7	Over	294	10.5	28.0	Over
Hay	196	6.0	32.6	20 - 25	Over	208	7.2	28.8	Over	238	6.5	36.7	Over
Hazel Wolf	207	8.5	24.3	22 - 27	Within	236	8.5	27.8	Over				
Highland Park	340	14.0	24.3	26 - 31	Under	367	14.0	26.2	Within	407	15.0	27.2	Within
John Stanford	115	5.0	23.1	20 - 25	Within	139	5.0	27.9	Over	137	5.5	25.0	Within
K-6 STEM @ Boren	149	4.5	33.0	20 - 25	Over	138	4.5	30.7	Over	126	3.5	35.9	Over
Kimball	261	7.5	34.8	60 - 65	Under	273	7.5	36.4	Under	318	7.5	42.4	Under
Lafayette	151	6.0	25.1	20 - 25	Over	165	6.0	27.5	Over	175	5.5	31.9	Over
Laurelhurst	145	5.0	29.0	20 - 25	Over	153	4.7	32.6	Over	132	4.5	29.3	Over
Lawton	72	4.0	18.0	30 - 35	Under	99	4.0	24.7	Under	98	4.0	24.4	Under
Leschi	176	8.2	21.4	20 - 25	Within	207	8.8	23.6	Within	254	9.0	28.2	Over
Licton Springs @ Lincoln	87	3.0	29.0	18 - 23	Over	69	3.0	23.1	Over				
Lowell	185	4.0	46.3	50 - 55	Under	171	3.7	46.1	Under	116	3.5	33.0	Under
Loyal Heights	54	4.5	12.0	16 - 20	Under	78	4.2	18.5	Within	77	4.5	17.1	Under
Madrona	207	8.0	25.9	22 - 27	Within	190	8.0	23.8	Within	202	8.5	23.7	Within
Maple	348	12.0	29.0	26 - 31	Within	360	12.0	30.0	Within	347	12.0	28.9	Within
Martin Luther King Jr.	344	14.0	24.6	26 - 31	Under	405	14.0	28.9	Within	407	14.0	29.0	Within
McDonald	109	3.5	31.2	50 - 55	Under	115	3.5	32.7	Under	110	3.5	31.4	Under
McGilvra	69	3.5	19.7	30 - 35	Under	78	3.5	22.1	Under	83	3.5	23.6	Under
Montlake	46	3.5	13.3	30 - 35	Under	54	3.5	15.4	Under	57	3.5	16.4	Under
Muir	265	11.0	24.1	22 - 27	Within	286	11.0	26.0	Within	315	11.5	27.4	Within

School	2015-16 (SEP through JAN)					2014-15				2013-14			
	Average Daily ME	Ave. Assigned Hours	Average MPLH	Standard Range	Under/ Over/ Within Standard	Average Daily ME	Ave. Assigned Hours	Average MPLH	Under/ Over/ Within Standard	Average Daily ME	Ave. Assigned Hours	Average MPLH	Under/ Over/ Within Standard
North Beach	75	3.5	21.4	30 - 35	Under	77	3.5	22.0	Under	72	3.5	20.6	Under
Northgate	280	11.0	25.4	22 - 27	Within	281	11.0	25.6	Within	291	11.0	26.5	Within
Olympic Hills @ Cedar Park	257	10.0	25.7	22 - 27	Within	281	10.0	28.1	Over	284	10.0	28.4	Over
Olympic View	182	6.5	28.0	20 - 25	Over	192	6.5	29.5	Over	199	6.5	30.6	Over
Orca	94	5.0	18.8	18 - 23	Within	105	5.0	20.9	Within	105	5.0	21.0	Within
Pathfinder	141	8.5	16.6	20 - 25	Under	149	8.5	17.5	Under	162	8.5	19.0	Under
Pinehurst										90	3.5	25.8	Over
Queen Anne	97	3.5	27.8	30 - 35	Under	92	3.5	26.4	Under	81	3.5	23.1	Under
Rainier View	201	6.0	33.4	20 - 25	Over	170	6.0	28.3	Over	169	6.0	28.2	Over
Rogers	156	5.0	31.3	20 - 25	Over	155	5.0	30.9	Over	146	5.0	29.1	Over
Roxhill	311	14.0	22.2	26 - 31	Under	381	14.3	26.6	Within	413	14.5	28.5	Within
Sacajawea	99	4.0	24.6	18 - 23	Over	109	4.0	27.2	Over	101	4.5	22.4	Within
Salmon Bay	91	4.0	22.7	30 - 35	Under	84	3.7	22.6	Under	95	3.5	27.2	Under
Sand Point	110	5.0	22.0	20 - 25	Within	134	5.6	23.9	Within	146	6.0	24.3	Within
Sanislo	225	5.5	40.9	60 - 65	Under	242	5.5	44.0	Under	219	5.5	39.8	Under
Schmitz Park	100	4.1	24.4	30 - 35	Under	118	3.5	33.8	Under	115	4.3	27.0	Under
South Shore	410	14.5	28.3	26 - 31	Within	434	14.2	30.5	Within	413	15.0	27.5	Within
Stevens	109	5.5	19.8	20 - 25	Under	119	5.5	21.6	Within	155	5.5	28.2	Over
Thornton Creek	91	3.5	26.1	30 - 35	Under	99	3.5	28.2	Under	93	3.5	26.6	Under
Thurgood Marshall	182	6.5	28.0	20 - 25	Over	189	6.8	27.8	Over	197	6.5	30.3	Over
TOPS	162	6.5	24.9	20 - 25	Within	175	6.5	26.9	Over	178	6.5	27.4	Over
Van Asselt	461	16.5	27.9	26 - 31	Within	464	16.5	28.1	Within	493	16.5	29.9	Within
View Ridge	66	3.5	18.7	30 - 35	Under	73	3.5	21.0	Under	67	3.5	19.2	Under
Viewlands	192	7.0	27.4	20 - 25	Over	215	6.7	32.1	Over	200	5.5	36.4	Over

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School	2015-16 (SEP through JAN)					2014-15				2013-14			
	Average Daily ME	Ave. Assigned Hours	Average MPLH	Standard Range	Under/ Over/ Within Standard	Average Daily ME	Ave. Assigned Hours	Average MPLH	Under/ Over/ Within Standard	Average Daily ME	Ave. Assigned Hours	Average MPLH	Under/ Over/ Within Standard
Wedgwood	87	3.5	24.8	30 - 35	Under	83	3.5	23.7	Under	84	3.5	23.9	Under
West Seattle Elem.	446	16.5	27.0	26 - 31	Within	479	17.1	28.0	Within	473	15.0	31.5	Over
West Woodland	156	6.0	25.9	20 - 25	Over	177	6.0	29.5	Over	177	5.5	32.3	Over
Whittier	99	5.0	19.8	18 - 23	Within	110	5.0	22.0	Within	136	5.0	27.2	Over
Wing Luke	306	11.0	27.8	26 - 31	Within	312	11.0	28.4	Within	337	11.0	30.7	Within

Source: SPS data with Prismatic calculations, March 2016

Adjusting both the MPLH standards to the ones recommended by the industry and the calculation of meal equivalents to those recommended by OSPI and the industry would update the management methodology of the district and allow for apples-to-apples comparisons with district using the same methodology. The effect of using industry standards for MPLH was shown in the previous exhibit. The effect of making both adjustments has the result shown in **Exhibit 3-8**. As shown, for the first half of 2015-16, most SPS schools are underproductive, 23 are within industry standards, and 20 are overproductive.

Exhibit 3-8
Productivity Results Using MPLH and ME Industry Standards
2015-16 (SEP Through JAN)

School Level	Using MPLH Industry Standards			Using MPLH Industry Standards and ICN ME Factors		
	Under	Within	Over	Under	Within	Over
High	11	1	1	11	1	1
Middle	10	0	0	10	0	0
Elementary	30	23	17	29	22	19

Source: SPS data with Prismatic calculations, March 2016

Management Recommendation

Adjust the school kitchen labor allocation process.

Nutrition Services should evaluate productivity for each school using assigned labor hours, and applying the recommended industry standards for ME and MPLH. Calculations should be made using the lowest recommended MPLH in the range and a determination should be made of which schools are over or understaffed and by what amount of hours.

The consulting team recommends no staffing cuts for school years 2016-17 and 2017-18 in order to focus efforts on increasing participation and a la carte revenue. In the consulting team's experience and in comparison to best practices and other data, there is substantial room to increase participation and a la carte revenue. The NS department should develop materials for staff to orient them on the new MPLH goals, using industry standards for ME and MPLH. These should be presented at a required regional all-staff meeting along with the focus to increase their participation and a la carte revenue in lieu of cutting labor hours. Training classes should be scheduled that will present methods and approaches to increasing participation.

Fiscal Impact

This recommendation can be implemented with existing resources.

Management Issue 3-5

SPS Nutrition Service does not maintain an adequate pool of substitute workers to cover vacancies. Interviews with area supervisors revealed they spend the majority of their time working as a substitute in their kitchens. They indicated the problem has become much greater during the current school year. When asked the question 'When

absences, are subs available?' managers and staff in focus groups overwhelmingly replied no. The lack of a sufficient substitute pool has resulted in limited monitoring and supervision of school operations. The large number of substitutes required to fill needed positions and cover for long-term absences has resulted in an extreme substitute shortage.

Data regarding the number of on call substitutes hired for the past three school years is shown in **Exhibit 3-9**. The number of available on-call substitutes is less for this year than is has been in the past. These on-call substitutes are not part of the pool of permanent employees who serve daily as substitutes. The district has nine float managers and seven float assistants who are permanent, float substitutes. At the time of the on-site work, all the float managers were assigned to long-term positions covering for extended absences.

Exhibit 3-9
Number of On-Call Substitutes Hired

Year	Number of On-Call Substitutes	Number of Float Substitutes
2013-14	35	NA
2014-15	37	NA
2015-16	19	16

Source: NS, March 2016

Data regarding the number of days staff was absent for FMLA, injury, and other long-term absences are provided **Exhibit 3-10.** The district has consistently needed the equivalent of eight to 10 full-time employees just to cover for long-term absences, leaving fewer substitutes available for routine for day-to-day coverage.

Exhibit 3-10
Number of Days Staff Absent

Year	Number of Days Absent	Number of Full-Time Employees Needed to Cover Long-Term Absences
2013-14	1,793	10
2014-15	1,506	8
2015-16 (partial year)	741	9

Source: NS, March 2016

In addition to long-term absences and day-to-day coverage, substitutes are needed to fill in for the length of time it takes to replace a position that has been vacated due to resignation, termination, or retirement. Posting #4 which opened 2/4/16 and closed 2/18/16 was provided by NS. This list included 25 positions available, 19 of which had been reposted, some multiple times. Not filling the position and reposting lengthens the time when substitutes are tied-up providing coverage.

The School Nutrition Association's (SNA) *Keys to Excellence* is a tool for child nutrition programs to assess their program operations compared to best practices. A best practice for human resources states that staffing should be scheduled according to operational needs.

Furthermore, "A contingency staffing plan is developed to ensure effective operations when vacancies occur".[9]

Management Recommendation

Ensure an adequate pool of substitutes.

NS should perform an analysis of substitute needs based on historical data to include coverage for positions available, long-term absences, and day-to-day coverage assuming all employees use approximately 50 percent of their available sick days. This analysis will result in a determination of an adequate substitute pool needed to ensure coverage in all schools is achieved. Efforts should be made to recruit and hire an appropriate number in the shortest time possible. Finally, the department should direct area supervisors to no longer cover for the absences of school-based staff. Other alternatives, such as operating without a manager for a short period, should be found.

In order to maintain an adequate substitute pool, NS should consider making a portion of the substitute positions full-time, adding to the number of float substitute positions. The consulting team recommends that the district explore working with a temp agency to provide an adequate pool of on-call substitutes.

Fiscal Impact

This recommendation can be implemented with existing resources. Based on historical data, the district needs a substitute pool to cover for approximately:

- 1,600 days due to long-term absences annually;
- five days per year of sick leave per employee (estimated at 1,000 days); and
- 20 days for each position that is vacated through turnover (estimated at 40 based on the number of terminations in 2013-14 and 2014-15).

With 180 days in the school year, this equates to 19 full-time positions at a minimum, assuming every on-call and float substitute is willing and able to work every day of the school year. As the current total pool of 35 on-call/float substitutes is insufficient, the district will need to analyze how often on average each position type is available for assignment and increase the number of total positions accordingly.

Management Issue 3-6

No goals exist for staffing at the central kitchen and there is no labor allocation process for the central kitchen. Interviews with central office and central kitchen staff indicated labor has been assigned by estimated or perceived need. There is an operations manager, two coordinators, five leads, and 17 assistants. Hours for each position type are shown in **Exhibit 3-11.**

[9] School Nutrition Association *Keys to Excellence* Best Practices Document https://schoolnutrition.org/keys/.

Exhibit 3-11
Central Kitchen Staffing

Position	Number of Positions	Daily Labor Hours	Total Daily Labor Hours
Operations Manager	1	8	8
Coordinator	2	8	16
Lead	5	8	40
Assistant	5	7.5	37.5
Assistant	2	7	14
Assistant	2	6.5	13
Assistant	6	6	36
Assistant	2	4.5	9
Total			**173.5**

Source: NS, March 2016

Industry best practice guidelines for staffing of central kitchens are shown in **Exhibit 3-23**. The exhibit does not include any needed time for transporting meals. The amount of time needed for transporting will depend on number of stops, distance, number of meals, and type of menus.

Exhibit 3-12
Staffing Guidelines for Central Production of Meals for More than One School

Number of MEQ	MPLH and Number of Labor Hours by Type of Preparation System				
	Bulk Cold*	Bulk Hot	Pre-Plated Cold (BAG)**	Pre-Plated Frozen*	Pre-Plated Hot*
	MPLH	MPLH	MPLH	MPLH	MPLH
200-500	25-30	27-32	21-26	22-27	20-25
501-1,000	30-35	30-35	30-35	37-42	40-45
1,001-2,000	50-55	45-50	50-55	55-60	60-65
2,001-3,000	65-75	60-70	100-110	120-130	130-140
3,001-5,000	75-85	70-80	110-120	120-130	130-140
5,001-10,000	110-130	110-120	110-120	120-135	130-150
10,001 up	150-160	120-130	120-130	120-135	130-150

**Requires heating at site before serving.*
***Should be highly automated when more than 20,000 food items are prepared per day.*
Source: School Food & Nutrition Service Management Sixth Edition, 2014

The consulting team found NS to be using both bulk cold and pre-plated types of preparation systems. 83 percent of the schools receive bulk meals and 17 percent of the meals shipped out of the central kitchen are pre-plated. The pre-plated frozen category most closely matches the method used in SPS. These guidelines provide a recommended range of labor hours for each number segment of meal equivalents. Data regarding actual meals shipped out of the central kitchen was not available. There are approximately 20,750 meal equivalents served in the schools. Because both bulk and pre-plated meals are produced in the central kitchen, the consulting team recommends staffing at the low end of the bulk cold

category since the greatest percentage of the meals are of this type. A comparison of the current labor hours (173.5) in the central kitchen to the recommended staffing hours (150) shows the central kitchen is overstaff by 23.5 hours.

ICN has published a training course titled *A Guide to Centralized Foodservice Systems*. They state in centralized foodservice systems, there usually are fewer staff hours needed at the satellites and more staff needed at the central kitchen. Likewise, the skill level of the staff may shift. There may be fewer skills required at the satellites and more skills required at the central kitchen. In fact, there may be a need to hire some specialty employees for the central kitchen, such as a baker, for which salary requirements will be greater than for traditional cooks. Some of the position titles that might be expected in a central kitchen include:

- cooks;
- assistant cooks, production workers;
- bakers;
- bakery assistants;
- packaging/assembly workers; and
- catering manager.

Management Recommendation

Staff the central kitchens according to industry guidelines.

All positions in the central kitchen should be analyzed and compared to their job description. An evaluation of the function of each position should be undertaken to determine if each is necessary for an efficient operation especially in the management area of coordinators and leads. The consulting team recognizes that the current union agreement does not allow reduction of central kitchen hours; however, that agreement is set to expire in 2017.

An analysis should be performed to determine areas where labor might be reduced. Is all equipment operating to full functionality and proper use? Are there any processes being performed by hand that could be automated? For example, during observations, the consulting team witnessed an inefficient process of hummus being hand portioned into containers and great effort being made to attach lids to each container. Is the meal order process from school to central kitchen to preparing carts for delivery an efficient process? Is the food and supplies ordering process efficient? This evaluation and analysis process should reveal potential areas for a reduction in labor hours.

Fiscal Impact

The analysis can be accomplished with existing resources. The exact fiscal impact cannot be calculated with current data, but the consulting team believes there will be a cost savings.

4 Menus and Production

This chapter addresses the menus, production, and procurement of the Nutrition Services (NS) department of Seattle Public Schools (SPS) in the following sections:

A. Findings
B. Issues in Menus
C. Issues in Production
D. Issues in Procurement

School meals are often the only meals students have access to during the school day and may comprise a substantial portion of the nutrition available to them, particularly students in poverty. This is an important consideration when health is linked to so many things that factor into a student succeeding at school and in the community.

Access to healthful meals at school as an essential link to student attendance, health and academic achievement is clearly supported by the Seattle Public Schools Student Wellness Policy Number 3405, which reads in part:

> *Research clearly indicates tremendous inequities in access to healthy food and opportunities for physical activity in our community. It is the imperative and intention of Seattle Public Schools to mitigate these disparities by providing equitable access to healthy food and physical activity across all Seattle schools. It is the imperative and intention of Seattle Public Schools to mitigate these health and educational disparities by acknowledging where disparities exist within the district and devising plans of action to address, prevent and thus reverse those disparities. Children who eat well-balanced meals and engage in physical activity throughout the school day are generally healthier and more likely to be academically successful. To clarify the district's role in supporting students, the following core wellness beliefs are adopted:*
>
> - *Students have equitable access to healthy foods and potable water throughout the school day—both through reimbursable school meals and other foods available throughout the school campus that meet or exceed Federal and state nutrition standards*
> - *Students are given adequate time to obtain and consume meals in an environment that encourages healthy eating*
> - *Foods that do not meet USDA Smart Snacks standards are not marketed or sold on school grounds during the school day;*
> - *School staff are encouraged to promote healthy nutrition and support physical activity; including not using food as a reward, scheduling recess before lunch, and practicing healthy celebrations*

SPS also demonstrates its commitment to school meal access via its Strategic Plan 2013-2018, in Goal 2, Strategy 3, Metric E1:

Goal 2: Improve Systems Districtwide to Support Academic Outcomes and Meet Students' Needs

Strategy 3: Integrate and align operational, business, technology and academic systems to support the needs of students, teachers and schools

Metric E1: Improve student readiness to learn by increasing meal participation rate of students who qualify for free or reduced lunch

A. Findings

Finding 3

Current procurement practices have resulted in a lack of effectiveness and adherence to regulations. SPS is not adhering to the updated USDA procurement rules for child nutrition programs that became effective October, 2015. Extensions of previous procurements may not result in the best quality products and services at the best prices for the program and are out of compliance with the new rules. The new procurement rules also become part of the OSPI-conducted USDA Administrative Review in 2016.

Seattle Public Schools issues local bids for bread, dairy and fresh produce products for use in its child nutrition programs. It is a member of the Puget Sound Joint Purchasing Cooperative (PSJPC) that competitively procures a prime vendor contract for fresh, frozen and staple products on behalf of over 100 school districts in Washington. The PSJPC bid was originally issued in 2012 with the option of subsequent extensions. The current bid extension is in effect through July 31, 2016.

The interim director indicated she would like to begin reviewing bid specifications but with responsibilities of the unfilled department positions split between existing staff, it is an overwhelming task. The district has a large, well-maintained warehouse, plus a freezer and cooler. Products are ordered and delivered by Food Services of America (FSA), the prime vendor of the PSJPC. The district pays the cost of the product plus a fixed per case fee that covers product storage, delivery and profit margin. The fixed per case fee varies depending on the number of cases ordered. Interviews with NS staff indicated that food service inventories are not taken on a regular basis. This could result in the program paying a higher per case fee if a low quantity is ordered.

Exhibit 4-1 shows the fixed fee per case for product categories in the bid. The fewer cases ordered, the higher the fixed fee per case.

Exhibit 4-1
Puget Sound Joint Purchasing Cooperative Bid Fixed Fee per Case Chart

Product Category	20-39 cases	40-99 cases	100-299 cases	300+ cases
Beverages	$3.00	$2.35	$1.95	$1.55
Disposables	$3.00	$2.35	$1.95	$1.55
Dry Groceries	$3.00	$2.35	$1.95	$1.55
Fruits, Vegetables, Juices	$3.00	$2.35	$1.95	$1.55
Frozen Fruits and Vegetables	$3.00	$2.35	$1.95	$1.55
Frozen Miscellaneous	$3.00	$2.35	$1.95	$1.55
Frozen Protein	$3.00	$2.35	$1.95	$1.55
Janitorial and Chemicals	$3.00	$2.35	$1.95	$1.55
Produce	$1.50	$1.50	$1.50	$1.50
Dairy	$3.00	$2.35	$1.95	$1.55
Bakery	$3.00	$2.35	$1.95	$1.55
Refrigerated Items	$3.00	$2.35	$1.95	$1.55
Seafood Items	$3.00	$2.35	$1.95	$1.55
Shortening, Oil, Margarine	$3.00	$2.35	$1.95	$1.55
Produce by the Pound	$0.30	$0.25	$0.20	$0.15

Source: Puget Sound Joint Purchasing Cooperative, March 2016

FSA warehouse delivery tickets go to the NS Accounting Specialist for a purchase order number. These are then sent to the district accounting department where the actual invoice is downloaded from the FSA website and paid. NS staff was unsure as to whether there is a process in place to check the invoices against the product specifications, the bid prices, or fixed fee amounts.

Non-bid items purchased from FSA have a higher fixed per case fee. Because of its warehousing capacity, it may be more advantageous to do a line item bid, awarding to more than one distributor, to gain the most competitive pricing on basic food and supply items.

Procurement was previously handled by a procurement specialist on the NS central office staff. The position was eliminated due to budget cuts. Procurement responsibilities were shifted to the operations manager position that is currently unfilled. Procurements are being handled by central office staff members who are trying hard to keep this critical function afloat but who have limited knowledge regarding child nutrition procurement.

The SPS district purchasing department issues the procurement for food service supplies. Feedback obtained from focus groups of kitchen managers and staff plus central office staff interviews showed school sites have difficulty getting smallwares, such as serving tongs, scoops, spoodles etc. Kitchen managers request these items through their area supervisor, but the process for obtaining these items breaks down and the items are not available. Currently, there is no smallware inventory in the warehouse, resulting in the most basic serving equipment not being available to schools in a timely manner.

The new USDA procurement rules for child nutrition programs are found in 2 CFR Part 200. USDA Policy Memo SP 02-2016, CACFP 02-2016, SNSP 02-2016 contains an overview and

questions and answers regarding the new rules for procurement activities using Federal funds. The updated guidelines were effective October, 2015. The new procurement requirements for child nutrition programs become part of the USDA/State Agency Administrative Review beginning in 2016. A written Code of Conduct, a written procurement plan, and inclusion in bids of pre-approved equal products are required. These do not appear in current SPS child nutrition procurements.

In the past, bids have specified a specific product brand and an "or equal". When the product equal is undefined, the distributor controls the definition of "equal". They may have an overage of a similar product they need to move and substitute it at the same bid price when it is actually of lower quality. Receiving procedures may not allow for a product to be refused because the receiving staff does not know the original specification or the product is needed to meet the menu.

The updated USDA procurement guidelines indicate that an "approved equal" must be identified on the bid. A district may indicate its preferred product first, but must identify an approved equal. This gives product control to the district, not the distributor.

USDA Foods (commodity) products are also integral parts of the menu options and food cost controls. As part of the National School Lunch Program, SPS was eligible to receive $0.3125 per meal in USDA Foods of their choice in the 2015-16 school year. The per meal allocation increases to $0.3175 in the 2016-17 school year.

The Child Nutrition Section of the Office of the Superintendent of Public Instruction oversees the USDA Foods program in Washington and provided this formula for 2015-16 as an example:

[total lunches served (previous year) x meal rate ($0.2375) x Food and Nutrition service adjustment (based on Federal law; 12 percent rule) ($0.75)] = $0.3125

$0.3125 + past year carryover = Entitlement for the current school year.

Schools may order bulk USDA Foods items that can be prepared at the district level or can be diverted to a manufacturer for conversion into convenience, processed items. There will be some variance between the Value of Commodities Shipped report received by SPS and the OSPI Entitlement Allocation/Used/Balance data. A summary of SPS entitlement allocation, entitlement used, and remaining balance is shown in **Exhibit 4-2**.

Exhibit 4-2
Summary of SPS Entitlement Funds

School Year	Entitlement Allocation	Entitlement Used	Remaining Balance
2013-2014	$1,024,357.90	$844,480.63	$179,877.27
2014-2015	$1,057,642.10	$1,071,423.10	($13,781.00)*
2015-2016	$1,113,782.59	$1,111,831.59	$1,951.00
2016-2017	$1,131,837.38	$985,750.50**	$146,086.88

**reclaimed inventory, **based on usage estimates*
Source: Washington State Office of Superintendent of Public Instruction; Child Nutrition Section, April 2016

The most effective procurement system includes competent personnel, appropriate equipment, proper facilities, communication relating orders to delivery, and an easy and prompt feedback system. States and local districts may require more stringent procurement procedures.

Planning the procurement means taking a systematic approach before releasing the solicitation. *Procurement in the 21st Century* outlines the steps involved in a systematic procurement approach:

- implement principles of good procurement;
- competitive procurement: understanding informal, formal, and noncompetitive procurement methods;
- practice ethical behavior;
- understand stakeholders' expectations;
- determine the menu;
- screen the product;
- forecast the quantity;
- allow adequate solicitation lead time;
- write specifications;
- control product movement and cost management;
- create the solicitation document;
- announce the solicitation;
- award the contract; and
- manage the contract.

The Institute of Child Nutrition (ICN), in conjunction with the USDA, developed *Procurement in the 21st Century*, a training updating procurement in school nutrition programs. Professional standards for school nutrition program procurement are outlined in this training and shown in **Exhibit 4-3**.

Exhibit 4-3
Best Practices in Nutrition Services Procurement

Essential Procurement Knowledge Statements
knows ethical practices for procurement
knows the relationship of standardized recipes to accurate ordering and inventory management
knows methods to project food and supply needs
knows fundamentals of developing specifications for food products, supplies, and equipment that incorporate quality and/or performance indicators
knows guidelines for procurement and processing of USDA foods following Federal and state regulations
knows basic principles of requests for proposals (RFP), formal bidding, and informal bidding (quotes)
knows the structure of procurement channels from manufacturer to the school nutrition program for food, supplies, and equipment
knows guidelines for procurement and processing of USDA foods following Federal and state regulations
knows basic principles of requests for proposals (RFP), formal bidding, and informal bidding (quotes)
knows the structure of procurement channels from manufacturer to the school nutrition program for food, supplies, and equipment
Essential Procurement Skill Statements
develops and monitors procurement procedures for school nutrition sites to order, receive, and store products
evaluates current purchasing practices to determine effectiveness
develops appropriate bid documents that include product specifications, usages, and special instructions/conditions following federal, state, and local regulations
evaluates bids/quotes and makes purchase recommendations following Federal, state, and local regulations
analyzes technical support, training availability, maintenance service availability, and cost of upgrades when considering new purchases
utilizes manufacturers, local representatives, and dealers to answer questions and provide cost information on available equipment
evaluates purchasing methods (e.g., bid buying, prime vendors, group purchasing) and selects most appropriate method for the school nutrition program
develops product specifications that ensure broad customer acceptability and nutrition integrity utilizing pre-bid conferences, product testing/screening, and product comparison
monitors current market conditions that influence procurement decisions (e.g., price, supply, demand)
updates product knowledge by communicating with industry and other foodservice professionals

Source: ICN, Procurement in the 21st Century

Recommendation

Update child nutrition procurement to meet the USDA rules and to meet food and supply quality expectations of customers.

SPS should:

- review the USDA procurement rules for child nutrition programs in 2 CFR Part 200 of the National School Lunch Act to verify understanding of the required changes;
- review state and local procurement requirements that affect child nutrition program procurements;
- review USDA competitive purchasing methods – micro purchases, Invitation for Bid and Request for Proposal - to identify which method or combination of methods will result in the product and service quality the district seeks;
- develop processes for forecasting product and supply usage to assure accurate bid quantities and adequate warehouse, freezer and cooler inventories;
- develop a plan to regularly review, screen, and update product specifications to get the highest quality products;
- develop a process to conduct taste testing of food items, including USDA Foods, with customers and staff; and
- develop a process to identify annual smallware needs, bid the items and keep an adequate inventory in the warehouse to supply school kitchens as needed.

Fiscal Impact

Once the NS department is fully staffed, and with collaboration between district departments supporting NS, this recommendation can be implemented with existing resources.

B. Issues in Menus

In their book, *Managing Child Nutrition Programs: Leadership for Excellence* (second edition) Martin and Oakley write:

> *The menu in the school nutrition program serves as the major management. All foodservice related functions are influenced by the menu – from staffing to purchasing. The food production system, kitchen and serving facilities, financial management, record keeping, purchasing and receiving, storage, food safety, marketing, customer relations, and personnel related considerations are all influenced by the type and complexity of the school nutrition program menu.*

The School Nutrition Associations Keys to Excellence: Standards of Practice for Nutrition Integrity and the Institute of Child Nutrition's Procurement in the 21st Century, also indicate the menu is the driving force of all aspects of the school nutrition program.

The menu must meet all federal guidelines and be appealing to the customer. A well-planned menu includes:

- whole grain-rich foods;
- fruits and vegetables;

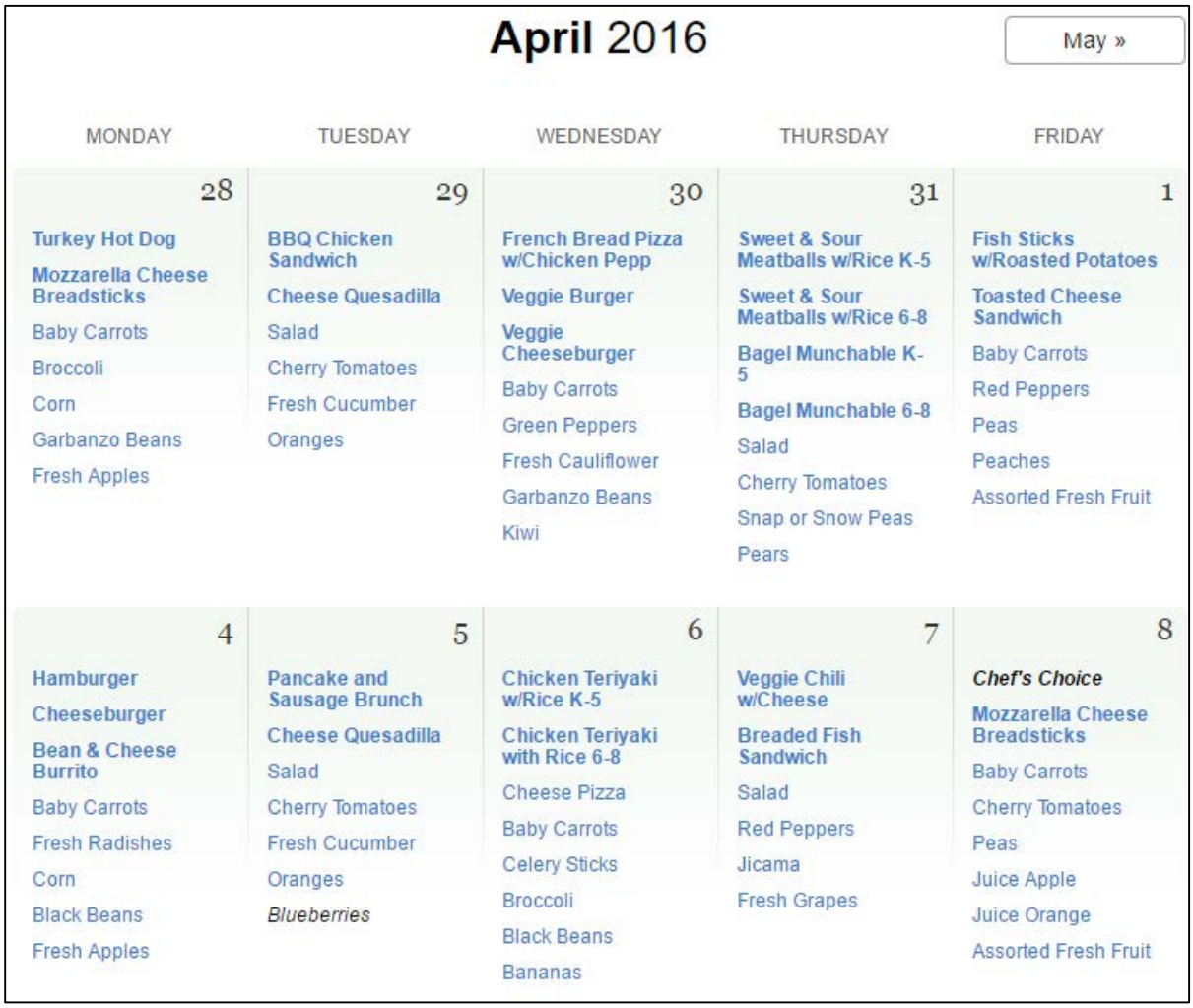
- low-fat proteins;
- a variety of shapes, textures, colors, and temperatures; and
- a blend of flavors.

Some other factors to consider in menu planning include: equipment, food cost, cultural food preferences, labor costs, skill levels, environmental friendliness, and the availability of USDA Foods (also referred to as commodities).

It is a best practice to use a cycle menu for a designated period of time. Menus created by seasons allow for the opportunity to incorporate in-season options. Planning menus in advance saves time, helps avoid repetitive tasks, reduces labor, and implements cost-effective inventory management. Standardized recipes and Stock Keeping Units (SKUs) are important considerations when planning menus. Failure to incorporate best practice indicators into the menu planning system can lead to decreased participation, decreased revenues, food waste, and increased food and labor costs.

Exhibits 4-4 and **4-5** provide a sample of the current SPS menus.

Exhibit 4-4
SPS Elementary Lunch Menu



April 2016

May »

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
28 **Turkey Hot Dog** **Mozzarella Cheese Breadsticks** Baby Carrots Broccoli Corn Garbanzo Beans Fresh Apples	**29** **BBQ Chicken Sandwich** **Cheese Quesadilla** Salad Cherry Tomatoes Fresh Cucumber Oranges	**30** **French Bread Pizza w/Chicken Pepp** **Veggie Burger** **Veggie Cheeseburger** Baby Carrots Green Peppers Fresh Cauliflower Garbanzo Beans Kiwi	**31** **Sweet & Sour Meatballs w/Rice K-5** **Sweet & Sour Meatballs w/Rice 6-8** **Bagel Munchable K-5** **Bagel Munchable 6-8** Salad Cherry Tomatoes Snap or Snow Peas Pears	**1** **Fish Sticks w/Roasted Potatoes** **Toasted Cheese Sandwich** Baby Carrots Red Peppers Peas Peaches Assorted Fresh Fruit
4 **Hamburger** **Cheeseburger** **Bean & Cheese Burrito** Baby Carrots Fresh Radishes Corn Black Beans Fresh Apples	**5** **Pancake and Sausage Brunch** **Cheese Quesadilla** Salad Cherry Tomatoes Fresh Cucumber Oranges *Blueberries*	**6** **Chicken Teriyaki w/Rice K-5** **Chicken Teriyaki with Rice 6-8** Cheese Pizza Baby Carrots Celery Sticks Broccoli Black Beans Bananas	**7** **Veggie Chili w/Cheese** **Breaded Fish Sandwich** Salad Red Peppers Jicama Fresh Grapes	**8** ***Chef's Choice*** **Mozzarella Cheese Breadsticks** Baby Carrots Cherry Tomatoes Peas Juice Apple Juice Orange Assorted Fresh Fruit

Source: SPS website, April 2016

Exhibit 4-5
SPS Secondary Lunch Menu



April 2016 May »

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
28 Chicken Teriyaki with Rice Cheese Pizza Pepperoni Pizza Garlic Chicken Pizza Hamburger Cheeseburger Chicken Burger Fish Sandwich w/ Cheese Veggie Burger Turkey Bacon Jack Burger	29 Salisbury Steak w/Mashed Potatoes & Roll Cheese Pizza Pepperoni Pizza Hawaiian Pizza Hamburger Cheeseburger Chicken Burger Spicy Chicken Burger Fish Sandwich w/ Cheese Veggie Burger	30 Chicken Corndog & Fries Cheese Pizza Pepperoni Pizza Veggie Pizza Hamburger Cheeseburger Chicken Burger Fish Sandwich w/ Cheese Veggie Burger	31 Chipotle Meatball Sub Cheese Pizza Pepperoni Pizza Garlic Chicken Pizza Hamburger Cheeseburger Chicken Burger Spicy Chicken Burger Fish Sandwich w/ Cheese Veggie Burger	1 Chicken Alfredo Penne w/Focaccia Cheese Pizza Pepperoni Pizza Garlic Chicken Pizza Hamburger Cheeseburger Chicken Burger Fish Sandwich w/ Cheese Veggie Burger
4 Spicy Wings, Potatoes & Roll Cheese Pizza Pepperoni Pizza Garlic Chicken Pizza Hamburger Cheeseburger Chicken Burger Fish Sandwich w/ Cheese Veggie Burger Turkey Bacon Jack Burger	5 Chicken General Tso with Noodles Cheese Pizza Pepperoni Pizza Hawaiian Pizza Hamburger Cheeseburger Chicken Burger Spicy Chicken Burger Fish Sandwich w/ Cheese Veggie Burger	6 Macaroni & Cheese w/Focaccia Cheese Pizza Pepperoni Pizza Veggie Pizza Hamburger Cheeseburger Chicken Burger Fish Sandwich w/ Cheese Veggie Burger	7 *All Beef Hot Dog w/Baked Beans* Cheese Pizza Pepperoni Pizza Garlic Chicken Pizza Hamburger Cheeseburger Chicken Burger Spicy Chicken Burger Fish Sandwich w/ Cheese Veggie Burger	8 *Chef's Choice* Cheese Pizza Pepperoni Pizza Garlic Chicken Pizza Hamburger Cheeseburger Chicken Burger Fish Sandwich w/ Cheese Veggie Burger

Source: SPS website, April 2016

Management Issue 4-1

Planned menus do not meet identified menu planning best practices, leading to decreased customer satisfaction and participation. While planned menus meet the current USDA meal pattern guidelines, the menu planning process is not fully addressing school nutrition industry best practice indicators.

The district's dietician position was eliminated due to budget cuts. The menu planning function was moved to the operations manager position. That position is currently vacant due to a hiring freeze. In the interim, the menu planning function has been assigned to one of the area supervisors. In addition to her other area supervisor responsibilities, she is

responsible for planning breakfast, lunch, afterschool snack, Head Start, egg free, seafood free and special diet menus and chairing the district menu planning committee. She is working hard to keep the critical menu planning function afloat.

The menu planning committee consists of the area supervisor, the central kitchen manager, and six secondary managers. The committee meets monthly to provide input on menu options. There is no defined process for obtaining menu input from elementary managers, students, or parents. Because input from critical stakeholders is missing, menu options may not be accepted by program customers, resulting in wasted food and labor and decreased revenue.

The current cycle menu was developed by the previous operations manager. It is rigid, lacks variety, and does not incorporate innovative food trends. This assessment by the consulting team was reinforced by feedback from kitchen staff and manager focus groups and in interviews with central office staff.

At one time, a grant provided direct involvement of local chefs employed by Tom Douglas, a local nationally known and respected restauranteur. The chefs worked with NS staff to develop and test recipes and menu concepts with parents, students, and staff. Several recipes were initially incorporated into district menus, including:

- butternut squash curry with chicken served over couscous or rice;
- Monterey jack cheese enchiladas with homemade green Chile sauce;
- pan fried noodles with chicken and vegetables;
- Tuscan greens and bean ragout with turkey sausage;
- Pollock Provencal with tomatoes, onions, olives and capers;
- fresh baked focaccia bread;
- salad greens;
- tabbouleh salad; and
- vanilla yogurt with homemade nut-free granola and dried fruit.

In the turnover at the central office the last few years, the use of these recipes was discontinued. Recently, the Butternut Squash Curry was again added to the monthly menu at all grade levels and was well received by both students and staff.

SPS menus try to incorporate locally grown foods when possible and NS participates in a Harvest of the Month program. During onsite visits limited or no marketing of the featured "food of the month" or other local foods was observed. This is a missed opportunity for educating customers on locally grown items and promoting nutrition education and information.

NS uses the NutriSlice interactive software program to provide information on menu items for students and families who access it on the NS website. NutriSlice also has a component where students can rate how they like a menu or menu item (**Exhibit 4-6**). This option is currently not being used.

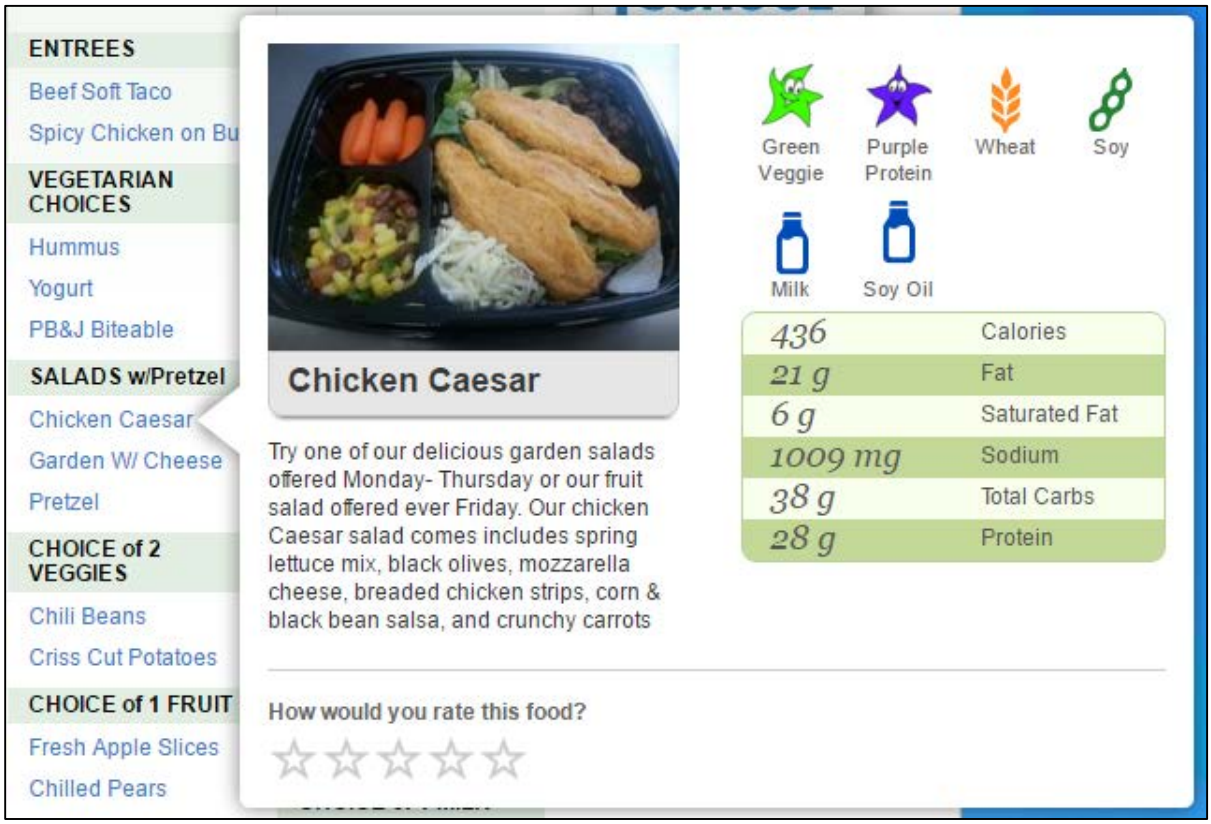
Exhibit 4-6
Rating Capability in NutriSlice



Source: SPS website, April 2016

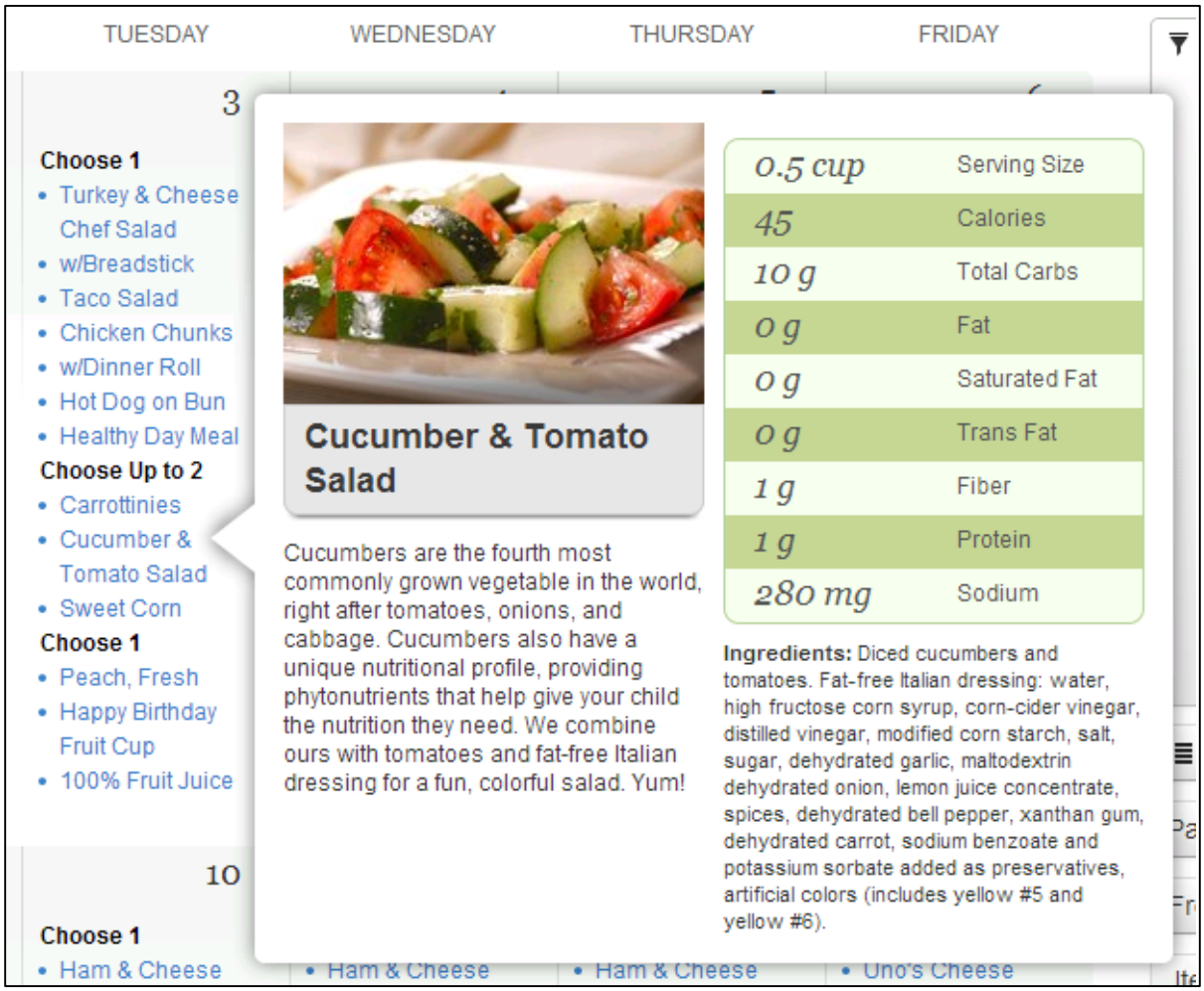
The district is also not using NutriSlice capabilities to promote the healthful content of its menu items. **Exhibit 4-7** provides examples of how school districts use NutriSlice to promote the content of its menu items, including a colorful photo, description, and icons for special diets. Some peer school districts also include a link to the manufacturer's label for some food items. It is not clear how the availability of NutriSlice for information and input is marketed to SPS parents and students. In school visits, the consulting team found that some cafeteria staff was unaware of NutriSlice, its capabilities, and its availability to students and their families.

Exhibit 4-7
Use of NutriSlice in Peer School Districts



Source: Fairfax County Public Schools (VA) website, April 2016

Exhibit 4-7 (continued)
Use of NutriSlice in Peer School Districts



Source: Henrico County Schools (VA) website, 2013

The School Nutrition Association Keys to Excellence: Standards of Practice for Nutrition Integrity outlines the best practices in menu planning shown in **Exhibit 4-8**. Few of these are present in the current NS menu planning environment.

Exhibit 4-8
SNA Keys to Excellence – Menu Planning

Best Practice	Indicators
Cycle menus for all reimbursable meal programs are used to direct school nutrition operations.	• The menu planning system includes, but is not limited to, costing, portion-planning for each age group, forecasting, nutrient analysis, variety, local foods, and preferences. • Cycle menus are used to forecast USDA Food orders and food bids. • Cycle menus are planned to maximize use of USDA Foods. • Participation history and production records are used in selecting menu components. • The availability and skill level of labor is considered when planning menus. • Non-program food offerings are included in the menu planning process. • A menu planning team is established that may include, but is not limited to, school nutrition staff, students, school wellness team members, and other school staff. • Menus for children with special food needs are planned collaboratively with school staff, parents, physicians, and other health professionals as appropriate. • Menus are planned with an understanding of the production capacity, availability of equipment, supplies, and the design of the facility.
Student preferences are considered when planning menus.	• Students are included in panels and/or committees used to select products and/or plan menus. • Menus are designed to accommodate flavor, texture, and service preferences of students. • School nutrition personnel solicit feedback from students about meal choices and report feedback to the manager. • School nutrition personnel are trained to monitor plate waste. • Menu choices take into account the lifestyle (such as vegetarian), local, cultural and religious preferences of students as well as choices for students with special food needs. • The offer vs. serve option is available to students at all grade levels. • Students, parents, and other stakeholders are encouraged to provide feedback on the menu (e.g., via email, suggestion boxes, comment cards, surveys, website, social media).
All recipes used in the school nutrition program are standardized.	• School nutrition personnel are trained to follow standardized recipes and to calculate quantities prepared based upon forecasting data. • A master file (hard copy or electronic) of standardized recipes is maintained and used. • A system is in place that allows school nutrition personnel to easily identify which standardized recipe to use, the number of servings to prepare, and how to record these details in the daily Production Record. • Standardized recipes include, but are not limited to, information such as ingredients, preparation instructions, portions for each grade level, critical control points, yield, and an analysis of key nutrients. • Updated recipes are tested and evaluated by school nutrition personnel and students. • Information about the nutrient content of meals and food is communicated to the school community.

Source: School Nutrition Association

Management Recommendation

Implement best practices in menu planning.

With the staffing reorganization recommended in Chapter 3 of this report and a commitment to keep area supervisors from serving as substitutes in school kitchens, menuing can be managed by an area supervisor as an additional duty. The supervisor should begin by reviewing the SNA Keys of Excellence Best Practices in Menu Planning (A1.1-A1.3).

SPS should:

- prioritize the indicators within each best practice, beginning with those identified as most critical to the NS operation, then develop an implementation plan of the prioritized items that includes identifying any kitchen staff training needed; and
- explore activating the NutriSlice comment option to gather menu feedback.

The consulting team recommends that NS prioritize these best practices first:

- The menu planning system includes, but is not limited to, costing, portion-planning for each age group, forecasting, nutrient analysis, variety, local foods, and preferences.
- Cycle menus are planned to maximize use of USDA Foods.
- Participation history and production records are used in selecting menu components.
- Students are included in panels and/or committees used to select products and/or plan menus.
- The offer vs. serve option is available to students at all grade levels.

Fiscal Impact

This recommendation can be implemented with existing resources, provided supervisor time is used appropriately.

C. Issues in Production

School menus can be creatively designed and produced to incorporate recommended food groups in a variety of ways, while reflecting current popular menu trends and cultural and dietary preferences. Menu design can successfully incorporate both fresh and processed quality ingredients into a variety of meals, that when prepared and served to optimize flavor and freshness, increase customer satisfaction.

"Scratch cooking" is difficult to completely operationalize for a student nutrition program. Some programs define it as "preparing food using basic ingredients rather than buying meals that have been already prepared"; others use "cooking without any ingredients mixed before buying them – buying each ingredient individually". The Institute of Child Nutrition (ICN) discusses looking at the form in which the food is purchased as part of defining scratch cooking. The ICN uses a food purchasing continuum with no processing of ingredients at one end and food purchased ready to heat or serve at the other end. Making bread from flour and yeast is at one end of the continuum; purchasing frozen dough that is

proofed and baked is approximately in the middle; and, purchasing bread already baked and ready to serve is at the other end of the continuum. To confuse matters, ICN also considers "speed scratch" to be an acceptable term; its definition lies approximately in the middle of the scratch continuum.

In practice, the consulting team has observed that the level of "scratch" to which a district cooks often depends on the specific menu items. Many school divisions use items like canned tomatoes as a base for making sauces, but consider the resulting sauce to be "from scratch". Some districts will bake dinner rolls from component ingredients (flour, yeast, water, etc.) and consider them to be from "scratch", but they will use purchased flour tortillas, include them with other ingredients, and consider the resulting chicken wrap also to be from "scratch". To be sure, in each of these scenarios, the more "scratch" items could be more or less nutrient dense than comparable less "scratch" items. More "scratch" does not, by itself, guarantee an item is more nutrient dense or "healthier".

Currently, NS offers two production modes: bulk or pre-pack. Bulk schools receive items from the central kitchen in bulk packaging, while pre-pack schools receive meals already divided into single servings. **Exhibit 4-9** shows the results of the two production modes. Both ship to the schools in the same kinds of containers. **Exhibit 4-10** shows the pre-packaged sandwiches and salads the central kitchen prepares that are delivered in the same format to both bulk and pre-pack sites.

Exhibit 4-9
NS Modes of Production

Bulk Production





Pre-Pack Production





Source: Prismatic, March 2016

Exhibit 4-10
Central Kitchen Prepared Meal Options

Sandwich Meal



Salad Meal



Source: Prismatic, March 2016

Management Issue 4-2

Pre-pack hot entrée and side components limit menu variety options and do not optimize the flavor, freshness, or eye appeal of the meals. Pre-pack entrées are portioned into special coated paper pre-pack containers and sealed with a film wrap at the central kitchen then shipped to 16 elementary school locations and heated onsite. The packaging does not highlight the entrées, especially those that are prepared from fresh scratch or speed scratch ingredients. When placed on the serving line, it is difficult to see what the entrée looks like through the wrap. The pre-pack entrees and components are placed on the counter or into serving wells for student selection. A majority of current hot entrées and side components (**Exhibit 4-11**) are brown and so are the pre-pack containers, making the serving line look bland and unappetizing (**Exhibit 4-12**).

Exhibit 4-11
Sample SPS Entrees

Sample of Breakfast Entrees	Sample of Lunch Entrees
Sausage & Cheese Muffin	Cheese Pan Pizza Veggie Burger
Mini Turkey Footballs	BBQ Chicken w/Roll Mozzarella Cheese Breadsticks
Dutch Waffle	Chicken Egg Roll w/Veggie Fried Rice Bean & Cheese Burrito
Rolled Egg Taco	Munchables (Bagel or Hummus)

Source: SPS, March 2016

Exhibit 4-12
Photos of Pre-Packaged Servings on Serving Lines

Lowell Elementary



Queen Ann Elementary



Montlake Elementary



Source: Prismatic, March 2016

While the consulting team found that presentation on serving lines needs improvement at both bulk and pre-pack sites, the pre-pack sites are substantially less appetizing than the bulk lines. **Exhibit 4-13** provides a comparison of student trays selected at a pre-pack versus bulk site. As shown, with the pre-pack hamburger entrée, the bun and meat are packaged separately. Students must assemble the burger themselves. Entrees in the pre-pack packaging are hard to see until unwrapped.

Exhibit 4-13
Comparison of Student Trays by Modes of Production

Pre-Pack Student Trays | **Bulk Student Trays**



Source: Prismatic, March 2016

Shipping entrees and side components in hot bulk promotes attractive presentation that showcases the enticing aroma and appearance of the food. Being able to see and smell the food encourages students to consume their food choices, as well as to try new items. A bulk service model can enhance staff interaction with customers when food is served, or offers older students a chance to self-serve when appropriate serving utensils and signage are provided.

Pre-pack production also has an impact on student lunch participation. In an analysis of elementary lunch participation for 2013-14, 2014-15, and the first five months of 2015-16, there was a statistically significant lower level of student lunch participation in the pre-pack

schools than in the bulk schools (for 2015-16, F(1,68) = 10.429, p = 0.002). **Exhibit 4-14** provides the average lunch participation by elementary production type.

Exhibit 4-14
Comparison of Lunch Participation by Production Type

Elementary Site Type	2013-14	2014-15	2015-16 (1st five months)
Bulk	44.0%	42.5%	40.2%
Pre-Pack	24.9%	24.1%	21.8%

Source: SPS with Prismatic calculations, March 2016

A portion of this difference could be attributed to the demographics of the schools, namely that the rate of students eligible for free or reduced-price meals at bulk elementary sites averaged 43.0 percent but was only 15.9 percent at the pre-pack sites. However, there is also a statistically significant difference between participation among low income students, depending on whether they attend a bulk or pre-pack site ($p<0.10$). At bulk sites, low income elementary students averaged 65.6 percent participation for 2015-16, while at pre-pack sites, they averaged only 59.6 percent participation (F(1,68) = 3.404, p = 0.069). This indicates that the mode of production itself is likely inhibiting lunch participation among low income students. There is also a difference in participation among full-pay students. At bulk sites, full-pay elementary students averaged 22.7 percent participation for 2015-16, while at pre-pack sites, they averaged only 14.5 percent participation (F(1,68) = 3.715, p = 0.58).

In onsite reviews of 10 pre-pack sites, the consulting team found that most already had the necessary space to accommodate bulk food receipt. Many also already had necessary equipment, as they were previously bulk receipt or full cooking kitchens. In only two schools observed (Sanislo and Montlake) was the available space potentially small for bulk food receipt.

Preparing foods from scratch and/or speed scratch at a central location allows control of ingredients and offers the opportunities to increase use of spices and to reduce sugar, while ensuring that standardized recipes are consistently used. Moving from the current dual system of bulk and pre-pack would reduce the complexity of operations in the central kitchen.

Management Recommendation

Convert all pre-pack sites to bulk in the next two years.

SPS should review pre-pack sites to determine kitchen capacity and condition of onsite equipment. The department can then determine repairs to existing equipment and identify equipment that may need to be purchased for bulk meal service. For those sites where space is tight, some kitchen reconfiguration may be needed. Pre-pack elementary managers should be trained on receiving, holding, presenting, and serving of bulk food items.

Fiscal Impact

This recommendation can be implemented with existing resources. Based on the current data, it does not appear that additional labor hours will be needed at each site were the district to implement only this recommendation. The consulting team anticipates some cost

reductions at the central kitchen from the reduced complexity of having only to do bulk preparation for the schools.

Holding all other factors constant, NS should expect that moving pre-pack sites to bulk sites will increase participation among low income students by six percent and among full-pay students by eight percent. On a daily basis, this would translate into an additional 101 meals per day (40 free or reduced, 61 full pay). On an annual basis, this would be an additional 18,180 meals, or approximately a one percent increase in the number of elementary lunches served. There is likely to be an increase in breakfast participation as well.

The fiscal impact is calculated as:

(40 F/R meals x $3.07) + (61 full-pay meals x $3.00) – (~$0.75 in new food cost per meal) x 180 school days = $41,391

Management Recommendation	2016-17	2017-18	2018-19	2019-20	2020-21
Convert all schools to bulk receipt.	$20,695	$41,391	$41,391	$41,391	$41,391

Management Issue 4-3

Kitchen capacity and equipment in secondary kitchens is not being utilized to prepare popular food items onsite, decreasing customer satisfaction and participation. The district secondary schools, with the exception of NOVA High School, do not prepare entrée and side items onsite, using standardized recipes. Entrée items are primarily heat and serve convenience foods. Prior to building the central kitchen, secondary kitchens prepared items such as soups, sauces, pasta, mashed potatoes, and baked rolls onsite. Focus group feedback noted that aromas of freshly made foods had encouraged customers to participate. In the onsite observations, several long-time staff members noted that more onsite preparation would likely improve meal participation.

Interviews with central office staff and area supervisors as well as focus group feedback from parents, kitchen managers, and kitchen staff indicated customers are asking for more food options to be prepared onsite. In conversations with onsite secondary staff they expressed interest in resuming onsite preparation of some food items to better meet customer expectations and improve food quality. Offering freshly prepared foods increases staff ownership in the nutrition program enterprise.

Lunch participation has greatly decreased since 2007-08. It has also decreased regardless of student eligibility type (**Exhibit 4-15**). While a number of factors have likely contributed to this decline, NS stakeholders identify the switch to central kitchen production as one of the keys.

Exhibit 4-15
Comparison of Lunch Participation Rates by Eligibility

Eligibility Type	2007-08 Overall	2014-15 Secondary Only
Overall	43.2%	27.3%
Paid	24.6%	9.7%
Reduced/Free	69.5%	52.8%

Source: Council of the Great City Schools Report and SPS with Prismatic calculations, March 2016

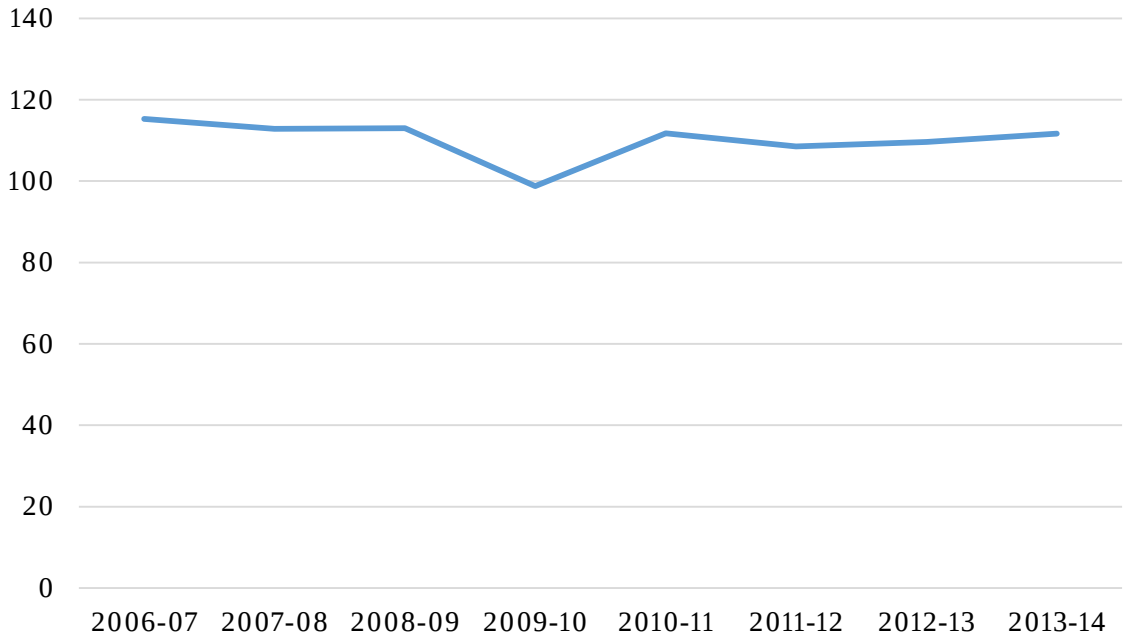
The consulting team noted that a number of secondary school sites were not using batch cooking practices. In five of eight secondary schools visited, the consulting team found that heat and serve foods were prepared for all lunches at once and held in warmers. After the first lunch, decreased food quality contributed to student food waste. At the end of day, foods not served were typically discarded by kitchen staff.

At the same time, resources in the form of preparation space and cooking equipment sit unused in many SPS kitchens, as kitchen footprints were not reduced nor equipment removed when the district switched to its current production mode.

According to district staff, the primary reason the district moved from school-based preparation to central kitchen preparation was the 2008 study completed by the Council of the Great City Schools (CGSC). A portion of one of the 24 recommendations made in that study was to "attain financial break-even status...through controlling costs by utilizing the central kitchen to convert secondary schools to bulk sites..." The 2008 study estimated that $1.0 million per year could be saved in the form of reduced labor costs from this recommendation. However, this has not happened. **Exhibit 4-16** compares the full-time equivalent (FTE) count from 2006-07 through 2013-14.[1] As shown, there was a drop from 113 FTE in 2008-09 to 99 in 2009-10, but an increase in 2010-11 to 112 FTE. NS staff believes that the reduction from 2008-09 to 2009-10 was likely due to the implementation of the CGCS recommendation, but the gain was not sustained. The department did not undertake any internal analyses to determine if implementing the recommendation had a fiscal impact.

[1] A change in the reporting methodology makes comparisons to 2014-15 and 2015-16 difficult.

Exhibit 4-16
Trend in Nutrition Services FTE Count



Source: OSPI Report 1801 Classified, 2006-07 through 2013-14

Onsite cooking increases the quality of pastas, mashed or baked potatoes, rice and noodles. It offers opportunities to roast or steam vegetables in small batches for each lunch, maximizing quality and flavor, which encourages selection and consumption.

In their book, *Managing Child Nutrition Programs: Leadership for Excellence* (second edition), Martin and Oakley define batch and just-in-time production methods:

- ***Batch Cooking****: refers to cooking in small quantities that can be served while the quality of the product is at its best. Batch cooking generally applies to preparing foods that require only short cooking times and do not hold well on the serving line, such as steamed broccoli and other vegetables and pasta products. Not only does batch cooking ensure higher-quality food products on the serving line, but balances the use of equipment and allows the school nutrition program staff to spread the workload over a longer period of time. This leads to less downtime and a more efficient work pattern.*

- ***Just-In-Time Production:*** *Production staff is encouraged to cook-to-the-line and use just-in-time food preparation (ICN, 1996a, 2005). Just-in-time food preparation or cooking-to-the-line, takes the concept of batch cooking a step further. While the techniques are the same, school nutrition program operations committed to just-in-time food preparation extend the batch cooking concept to most menu items. For example, freshly baked breads are baked throughout the meal service time as they are needed to ensure that each serving period has the fresh-from-the-oven bread throughout the serving period and not just at the beginning. Enough pizza, a favorite among student customers, to meet the demands of an entire school is too often baked and held for service. It is just as easy, and far*

more desirable, to bake the pizza as needed. Some foods hold better than others but most are best served as they come from the oven or steamer.

A variety of convenience products such as meat patties, pizza, burritos, and breakfast sandwiches, yield excellent results with just-in-time preparation. Cooking-to-the-line also saves money because only the amount of food needed is prepared. Producing all the expected number of servings at one time, as is currently done, may result in unnecessary food cost in leftovers.

Management Recommendation

Resume onsite preparation in high schools and middle schools, retaining some bulk preparation in the central kitchen.

SPS should:

- review secondary menus and central kitchen produced items to determine those that will be prepared onsite to optimize aroma, freshness, and flavor and those that will continue to be prepared in bulk at the central kitchen;
- review onsite kitchen equipment;
- determine if excess equipment can be utilized at other schools;
- surplus unwanted items;
- repair and clean equipment as appropriate;
- standardize recipes for onsite preparation and train kitchen managers in their use;
- develop a standardized kitchen manager training on batch cooking and just-in-time cooking-to-the-line;
- conduct regional kitchen manager training on batch cooking and just-in-time cooking-to-the-line; and
- provide training to kitchen managers on ordering, inventory management and meal cost control and continue ongoing training at manager meetings.

It will likely take three years to fully implement this recommendation.

Fiscal Impact

The exact fiscal impact will depend on a number of factors that cannot be accurately quantified with existing data. Given that switching to mostly central kitchen preparation had at most a 14 FTE impact, it is anticipated that the increases in employee costs will be minimal. On the revenue side, implementing this recommendation should produce at least a five percent increase in secondary lunch participation. This would increase revenues by more than $170,000 per year:

(5% x 1,063,147 lunches served to secondary students in 2014-15) x $3.20 in revenue[2] = $170,103

Management Recommendation	2016-17	2017-18	2018-19	2019-20	2020-21
Resume some onsite preparation at secondary schools.	$56,135	$113,970	$170,103	$170,103	$170,103

Management Issue 4-4

Customers do not have all menu choices available to them at each lunch period and/or toward or at the end of the serving line. Kitchen staff at elementary and secondary sites do not order and/or prepare enough of each menu item for customers to select their favorite daily meal choice. Ultimately, this reduces meal participation as students learn not to rely on the menu and to instead seek other alternatives.

The consulting team observed that elementary students who were toward the end of the line at each lunch period often had only one choice of the two offered on the menu. In some cases, both choices were gone and kitchen staff offered alternatives to the scheduled menu items, including yogurts, Sunbutter™ sandwiches, and cheese sandwiches. This was also true of salad bar lines. In some cases kitchen staff only put out a certain amount of salad bar items that tend to be popular, knowing that it will all be selected before the end of the serving period.

During a middle school observation the hot entrée option of Asian Chicken and Noodles was not available for third lunch. This forced students who might have selected these meal options to choose pizza, burgers, corn dogs or macaroni & cheese or to purchase a la carte snacks. At one high school, the consulting team observed a student enter the serving area at the start of the first lunch period to request an item that was on the menu. Kitchen staff responded that none was available because they felt overwhelmed with preparing other scheduled items for the day. That student left without making a purchase.

Overall, in 20 lunch observations, the consulting team found that in seven schools, 35 percent, the last student in line did not have all the same entrée options as the first student in line. In four schools, 25 percent, the entrée items offered did not match the menu. There were numerous instances where side items were inconsistent from the beginning to the end of the meal serving period.

A review of production records for one day at a single middle and a single high school site showed food cost losses due to discarded prepared food (**Exhibit 4-17**). The true cost is higher when preparation labor is added. Loss from food discarded in the kitchens at the end of the day may be a significant cost to the NS program.

[2] Estimated blended rate of free, reduced, and full-pay revenues.

Exhibit 4-17
Discarded Food Cost Chart

Food Item	Cost	# Discarded	Total
Fish Wedge ($0.66) Fries, 3 oz. ($0.11) Dinner Roll, 2 oz. ($0.105) Paper Boat ($0.03)	$0.905	17	$15.385
Turkey, 2 oz. ($0.56) & American Cheese, ½ oz. ($0.015) Lettuce, Green Leaf, 1 oz. ($0.11) Hoagie Roll ($0.1725) Clear, Hinged Container ($0.15)	$1.0075	6	$6.045
Chicken Caesar Salad Chicken, 2.5 oz. ($0.64) Romaine, chopped, 2.5 cups ($0.1875) Parmesan cheese, shredded, ½ oz. ($0.14) Dressing Packet ($0.31) Clear, Hinged Container ($0.15)	$1.4275	3	$4.2825

Source: SPS, March 2016

The cold salad and sandwich meals prepared by the central kitchen are attractive but cafeteria staff tends to only order a few and then divide them between the lunch periods. A middle school observation found only 18 Turkey and Swiss Sandwich "On The Go" meals were ordered from the central kitchen. Most were selected during the first lunch; the remaining sandwiches were selected at the beginning of the second lunch and none were available for the third lunch.

During secondary site observations all the cold sandwiches and salads put on the serving line were selected before the end of the serving periods. Kitchen managers indicated they order menu choices based on historical data, but they are not considering the impact of running out on the historical data. If certain choices, like sandwiches and salads are consistently under-ordered, the historical data are incorrect. In several elementary schools, cafeteria staff noted that they did not see a problem with running out of one entrée as long as there was something else available to give to students. This is not truly meeting demand and would not be considered acceptable in a restaurant on a regular basis.

Management Recommendation

Require all schools to have available all menu options for the last student in line each serving period.

SPS should:

- develop a standardized kitchen manager training on forecasting and ordering menu choices;
- use student focus groups, student surveys, or other means to gather student input to assist in improving the ordering of choices; and

- implement batch cooking, just-in-time cooking, and cooking-to-the-line strategies to assure all hot choices are available for the last students in line during each serving period.

Ultimately, this should improve student participation, as students learn they can trust what is on the published menu will actually be available for them to select. Developing an accurate database of what students actually like at each school will help the district to develop menu items that are popular with students. In overseeing their schools, area supervisors should include a check of whether the last student in line each serving period has all the same options as the first.

Fiscal Impact

Once NS is fully staffed the implementation strategies can be accomplished by central office and central kitchen staff.

Management Issue 4-5

The district's salad bar options are repetitious, limiting vegetable and fruit options. Across SPS schools, salad bar options are also inconsistent, based on manager choice, rather than student selection data or accurate production records. Currently the daily menu planners produced for elementary schools specify the vegetables for the salad bar. The vegetables and fruits (**Exhibit 4-18**) are ordered by the central kitchen and shipped to the schools.

Exhibit 4-18
Vegetables and Fruits available on the Produce Bid for Salad Bars

- Apples, Fuji
- Apples, Pink Lady
- Apples, Gala
- Apples, Sweet, Sliced Fresh
- Bananas
- Grapes, Seedless Green
- Grapes, Seedless Red
- Kiwi, Bulk
- Melon, Cantaloupe
- Melon, Watermelon
- Melon, Watermelon seedless
- Orange, Navel or Valencia
- Pear, Bartlett
- Pear, D'Anjou
- Pineapple, approx. 1" chunk
- Pepper, Bell Green; Bell Red
- Spinach, cleaned
- Broccoli Buds
- Cabbage, shred
- Carrot, Baby, peeled, 2"
- Carrot, peeled, 2 oz. individual bag
- Carrot, Matchstick
- Cauliflower Buds
- Celery, diced
- Cucumber
- Fajita Mix: Onions & Peppers
- Jicama, approx. 1" chunk
- Lettuce, Iceberg Head
- Lettuce, Leaf, Green Crowns
- Lettuce, Romaine, chopped
- Lettuce, Romaine, head
- Onions, Red or Yellow Jumbo
- Peas, Sugar Snap, bulk
- Tomatoes Cherry and Grape

Source: SPS, March 2016

The central kitchen also orders fresh produce through the Department of Defense (DOD) produce procurement using USDA Foods entitlement dollars. Purchasing from DOD and the local bid ensures a wide variety of produce is available.

At all grade levels it was observed that vegetable and fruit components were not being properly identified at the point of sale, leading to over serving and food waste. The vegetable and fruit components of the meal can be met with either frozen, canned, or fresh products. Vegetables and fruits incorporated into breakfast or lunch entrees or side dishes also count toward meeting the vegetable and fruit requirement. There are daily minimum servings of vegetables and fruits but the vegetable subgroup servings are cumulative over a week. Errors in this area that the consulting team observed included:

- Students with sufficient vegetables in the entrée item or with sufficient vegetables as a side item were told by cafeteria staff that they still had to also select a fruit. This indicates a lack of understanding of the required components for a reimbursable meal.
- Cafeteria staff provided improperly sized utensils on the salad bar, leading students to select a larger serving than necessary to meet requirements.
- Cafeteria staff not including canned fruit on the salad bar in the belief that it would not count towards a required component.

There were also problems with preparation and presentation of salad bar items. Errors in this area that the consulting team observed included:

- Canned beans are shipped from the warehouse and are put on the salad bar right from the can.
- Canned fruit was not observed as an option at all sites visited, even though staff said students like canned fruit. In interviews, area supervisors indicated that some kitchen staff think it is too much work or too messy to offer canned fruit.
- Individual applesauce cups were brought out at a pre-pack elementary site when a student with missing teeth asked if there was something softer than the whole apples. They were not made available before the student's request.
- The peas shipped from the central kitchen arrive partially frozen. One site rinsed them to wash off the frost but others did not. Students typically threw them away.
- A focus group of elementary managers and staff commented that students at their school may not like the salad bar choices indicated on the menu planner but they have to order what is on the planner.

Preparation and service methods were not standardized. Some sites put out all the choices at the beginning of the first lunch for all the lunch periods. One middle school site did not refrigerate the fruits and vegetables between lunches although there was a half hour between the serving periods and did not add to the quantities left after the second lunch for the third lunch.

In the USDA toolkit *Fruits and Vegetables Galore,* salad bars are promoted as a way to add excitement to lunch meals and increase consumption of fruits and vegetables. Guidelines on setting up a salad bar emphasize presentation, a variety of color, shapes, and sizes, and a large variety of choices. According to Cornell University Food and Brand Lab, making healthy food more convenient constitutes an effective way of getting children to choose more of the healthy foods. The USDA promotes consumption of vegetables and fruits in all forms;

fresh, frozen, and canned. The Poudre School District in Colorado has done an excellent job with their salad bars (**Exhibit 4-19**). As shown, each school in Poudre has two bars—one with fruit options and one with vegetable options. In Poudre, this is a daily requirement to provide students with choices. **Exhibit 4-20** shows a salad bar at a high school in Spokane Public Schools.

Exhibit 4-19
Poudre Public Schools Salad Bars

Elementary School A





Elementary School B





Middle School





Source: Prismatic, file archives

Exhibit 4-20
Spokane Public Schools - The Community School Fresh Fruit and Vegetable Bar



Source: Prismatic, January 2014

As often as possible, Poudre positions the vegetable and fruit bars at the beginning of the serving line or self-serve bar. Students are allowed to take as much as they want. Cashiers at the point of service (POS) monitor selections for portion size and to ensure they meet the vegetable/fruit requirements of the meal pattern requirements of the *Healthy, Hunger-free Kids Act of 2010* (*HHFKA*).

Poudre developed the Salad Bar Requirements as shown in **Exhibit 4-21**, which is a 25-day menu cycle for their vegetable and fruit bars. This is an excellent tool to ensure the bars in each school follow the *HHFKA* vegetable/fruit subgroup (color) guidelines per week as well as guide staff to create colorful and attractive bars.

Exhibit 4-21
Poudre Salad Bar Cycle

Salad Bar Requirements

8 fresh fruit /vegetable offered daily
8 fresh produce
1 canned product

Total minimum of 9 offerings on the salad bar
MUST be offered..... the green and orange veggies/fruit as menu item
Condiments include but are limited to pickles, peppers (banana), olives, Jalapenos. These items are not included in your total 9 items.
These are only to be used as side or condiments.
You are welcome to use in addition to your daily total.

Salad Bar: (cold)

Cycle 1	Cycle 2	Cycle 3	Cycle 4	Cycle 5
1.Romaine Lettuce 2.BLUE 3.RED 4.ORANGE 5.WHITE 6.Broccoli 7.Carrots 8. RED VEGGIE 9.Canned product	1. Spring Mix/ Spinach 2. WHITE 3. RED 4. ORANGE 5. Butternut Croutons 6.GREEN VEGGIE 7. RED VEGGIE 8. WHITE VEGGIE 9. Canned product	1. Romaine Lettuce 2. ORANGE 3. RED 4. WHITE 5. GREEN 6.Broccoli 7. ORANGE 8. RED 9. Canned product 10. Fruit/Vegetable of the Month	1. Spring Mix/ Spinach 2. WHITE 3.RED 4. BLUE 5. Carrots 6.WHITE 7.RED 8. GREEN 9. Canned product	1.Romaine Lettuce 2. BLUE 3. WHITE 4. RED 5. ORANGE 6. ORANGE VEGGIE 7. Broccoli 8. WHITE 9. Canned product
Cycle 6	**Cycle 7**	**Cycle 8**	**Cycle 9**	**Cycle 10**
1.Romaine Lettuce 2.WHITE 3. RED 4. ORANGE 5. GREEN 6. Carrots 7. RED 8. WHITE 9. Canned product	1. Spring Mix/ Spinach 2.GREEN 3. RED 4. WHITE 5. ORANGE 6. Red/Orange Peppers 7.Broccoli 8. GREEN 9. Canned product	1.Romaine Lettuce 2. WHITE 3. BLUE 4. RED 5. GREEN VEGGIES 6. ORANGE 7. RED VEGGIES 8. WHITE 9. Canned product 10. Fruit/Vegetable of the Month	1.Spring Mix/ Spinach 2. GREEN 3. RED 4. WHITE 5. ORANGE 6. Butternut Croutons 7 Broccoli 8. RED 9. Canned product	1.Romaine Lettuce 2.BLUE 3. WHITE 4. GREEN 5. RED VEGGIE 6. ORANGE 7. WHITE 8. BLUE 9. Canned product

Exhibit 4-21 (continued)
Poudre Salad Bar Requirements

Cycle 11 1. Spring Mix/Spinach 2. GREEN 3. BLUE 4. WHITE 5. RED 6. CARROTS 7. Broccoli 8. RED VEGGIE 9. canned product	Cycle 12 1 Romaine Lettuce 2. ORANGE 3. RED 4. GREEN 5. Sweet potato salad 6. GREEN VEGGIES 7. ORANGE 8. WHITE/TAN 9. canned product	Cycle 13 1 Spinach Mix 2. ORANGE 3. WHITE 4. RED 5. GREEN 6. RED VEGGIES 7. Broccoli 8. ORANGE 9. canned product 10. Fruit/Vegetable	Cycle 14 1. Romaine Lettuce 2. WHITE 3. RED FRUIT 4. BLUE 5. Red/orange peppers 6. RED VEGGIE 7. GREEN VEGGIE 8. WHITE/TAN 9. Canned product	Cycle 15 1. Spring Mix/ Spinach 2. RED 3. GREEN 4. ORANGE 5. WHITE 6. Carrots 7. Broccoli 8. RED VEGGIES 9. Canned product
Cycle 16 1.Romaine Lettuce 2. ORANGE 3. WHITE 4. RED 5. GREEN 6. RED VEGGIES 7. Broccoli 8. ORANGE 9. Canned product	Cycle 17 1. Spring Mix/ Spinach 2. RED 3. GREEN 4. ORANGE 5. WHITE 6. Red/Orange Peppers 7.Broccoli 8. WHITE 9. Canned product	Cycle 18 1.Romaine Lettuce 2. RED 3. GREEN 4. ORANGE 5. GREEN VEGGIES 6. ORANGE 7. RED VEGGIES 8. WHITE 9. Canned product 10. Fruit/Vegetable of the Month	Cycle 19 1.Spring Mix/ Spinach 2. ORANGE 3. WHITE 4. RED 5. GREEN 6. Butternut Croutons 7. Broccoli 8. RED VEGGIES 9. Canned product	Cycle 20 1.Romaine Lettuce 22. GREEN 3. BLUE 4. WHITE 5. RED 6. Red/Orange Peppers 7. GREEN 8. WHITE/TAN 9. Canned product
Cycle 21 1.Romaine Lettuce 2. ORANGE 3. RED 4. GREEN 5. WHITE VEGGIES 6. Carrots 7.RED VEGGIES 8. GREEN 9. Canned product	Cycle 22 1. Spring Mix/ Spinach 2. GREEN 3. BLUE 4. WHITE 5. RED 6. Red/Orange Peppers 7.Broccoli 8. WHITE/TAN 9. Canned product	Cycle 23 1.Romaine Lettuce 2. GREEN 3. RED 4. WHITE 5. GREEN VEGGIES 6. ORANGE 7. RED VEGGIES 8. WHITE 9. Canned product 10. Fruit/Vegetable of the Month	Cycle 24 1.Spring Mix/ Spinach 2. RED 3. GREEN 4. ORANGE 5. WHITE 6. Butternut Croutons 7. Broccoli 8. RED 9. Canned product	Cycle 25 1.Romaine Lettuce 2 WHITE 3. RED FRUIT 4. BLUE 5. Red/Orange Peppers 6. WHITE/TAN 7. GREEN 8. ORANGE 9. Canned product

Source: Poudre School District, May 2013

Management Recommendation

Improve salad bar standardization.

SPS should:

- develop a salad bar cycle similar to the Poudre School District, making it easy for schools to offer a wider variety of vegetables and fruits while meeting the meal pattern guidelines;
- improve service to elementary school customers by providing daily vegetable and fruit options appropriate for those with loose teeth;
- revised the standardized salad bar plan for all schools to assure that all daily varieties of vegetables and fruits are offered crisp and fresh for each lunch period;
- include the vegetable and/or fruit contribution of menu items on the menu planner; and

- train kitchen managers on how to review menus to identify all vegetable and fruit servings. Include training for point-of-service staff to correctly identify vegetable and fruit components of a reimbursable meal.

Fiscal Impact

This recommendation can be implemented with existing resources.

Management Issue 4-6

Secondary meal options lack creativity and neither reflect a variety of current menu trends, nor the variety that customers find off campus. A review of SPS secondary menus and onsite observations at district middle and high schools found that the majority of food items offered daily at both breakfast and lunch are heat and serve convenience foods.

Kitchen staff spend time pre-dishing items that could more efficiently be set up for self-service, freeing staff time to batch cook or cook-to-the-line and refresh and clean the salad and condiment bars between lunches. **Exhibit 4-22** shows several examples of SPS serving lines.

Exhibit 4-22
Seattle Schools Serving Lines

Lunch - Washington MS



Breakfast Entrees – Hamilton MS



Breakfast Entrees – Eckstein MS



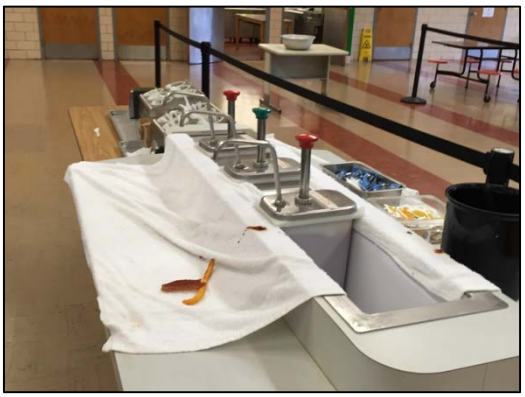
Lunch Entrée and Side - Roosevelt HS



Lunch Entrée – West Seattle HS



Condiment Bar – Mercer MS



Source: Prismatic, March 2016

Vegetarian meal options are limited. At the secondary schools vegetarian options were typically Veggie Burgers and Cheese Pizza. The consulting team's menu review found that some entrée meat items could be declined and a vegetarian meal would result, but it is not clearly presented to students and parents. Protein options are not offered on the salad bar so that students can compose reimbursable meals entirely from the salad bar. Menu choice signage was observed to be bland, nonexistent, or incorrect.

Food bars are popular and practical. They can offer cultural items and support dietary preferences within the entrée and side options. Panda Express and Chipotle are examples of local restaurants where customers can customize a meal from various options. Popular school food bars are:

- taco: with meat or seafood and/or beans, vegetarian beans and peppers; kernel corn; tortilla or tortilla chips;
- teriyaki: with oven seasoned baked rice or noodles, chicken, beef or seafood teriyaki and stir fry vegetables;
- pasta with marinara and meat sauce and/or meatballs; Italian blend or roasted vegetables;
- baked potato with a meat and vegetarian protein option and vegetable option; and
- soup and bread.

In a study conducted by Youth Expanded Food and Nutrition Education Program in 2010, research in school-based nutrition education has found that change in nutrition-related behaviors requires more intense, long-term interventions; the amount of exposure to nutrition education, while adequate to bring about changes in knowledge, may not be adequate to influence children's behavior. In recent years, the role of home and school environments in influencing children's dietary behavior has been extensively studied (Cullen et al., 2004; French, et al, 2003) and states lack of change in nutrition-related behaviors could be that children have little control over their nutritional environments. Therefore, nutrition professionals have an opportunity to influence student consumption patterns by offering healthy choices.

Reducing student wait time in line is also a best practice to increase participation. Setting up the self-serve food bar as an additional serving station with a second POS takes the pressure off one long serving line. In a number of schools, the consulting team observed unused or underused serving lines in SPS secondary schools. These resources could be put to use offering expanded menu options and also reduce line wait times.

Management Recommendation

Expand menu offerings to include self-serve food bars in secondary schools.

Using student input data, the district should develop rotating self-service food bars. For breakfast, the bar could include freshly prepared items such as yogurt parfaits, scrambled eggs or omelets with fresh pico de gallo or salsa and roasted pineapple. For lunch, the bar could be used to ensure that a vegetarian option is available daily, in addition to maintaining a vegetarian option(s) at other points of service.

Fiscal Impact

This recommendation can be implemented with existing resources, once the NS central office is fully staffed.

Management Issue 4-7

Elementary menus do not offer a salad, sandwich, or yogurt parfait meal daily, limiting what are typically popular student choices. This likely negatively impacts elementary lunch participation.

Two lunch entrée items are available daily in SPS elementary schools. With the exception of the Hummus or Bagel Munchable, which are offered one day a week, both entrees are hot. No protein items are offered on the salad bar, so a student cannot select a reimbursable meal solely from that area. In its elementary lunch observations, the consulting team observed many home packed lunches comprised of salads, sandwiches and yogurt, fruit, vegetables, and crackers.

In other Washington districts, more daily entrée options are available for elementary students. Spokane Public Schools offers a daily hot entrée and a daily cold deli meal option. The deli options rotate between:

- chef salad;
- sandwich;
- PB & J sandwich; and
- yogurt meal.

The Federal Way school district offers a daily sub sandwich meal option and a specialty salad meal option daily in grades K-5. Specialty salads are:

- Monday: Zesty Chicken w/Cilantro Lime Dressing;
- Tuesday: Cranapple Chicken with Honey Dijon Dressing;
- Wednesday: Loaded Garden Salad w/Sesame Ginger Dressing (No Meat);
- Thursday: Fiesta Taco w/Ranch Dressing (Beef); and
- Friday: Good Fortune w/Celery Seed Dressing (Turkey),

The Kent school district offers these cold meal options over the week:

- yogurt/corn muffin/sunflower seeds;
- vegetarian salad/PB cup/bagel; and
- chicken caesar salad.

Outside Washington, the Dallas Independent School District (Texas) offers elementary students these cold meal options over the week:

- Mediterranean dip plate;
- yogurt parfait;
- PB & J with string cheese;

- turkey and Swiss sandwich;
- harvest salad; and
- ham and cheese sandwich.

Both Federal Way and Kent have central kitchens similar to SPS where putting together the cold options maximizes staffing and provides consistent food quality.

Management Recommendation

Add a consistent salad, sandwich, or yogurt parfait entrée in elementary schools, eliminating the second hot entrée.

SPS should:

- develop a cycle menu that incorporates a salad, sandwich, or yogurt parfait meal option daily at elementary sites to increase daily student options; and
- conduct student taste tests of new items and market the new choices to all customers.

Fiscal Impact

The consulting team has observed that offering a consistent cold entrée as an alternative to a hot entrée increases student lunch participation. A conservative estimate of a two percent increase in elementary lunch participation would result in an additional $130,000 in revenue annually:

(2% x 2,225,731 lunches served to elementary students in 2014-15) x $3.00 in revenue[3] = $133,545

Management Recommendation	2016-17	2017-18	2018-19	2019-20	2020-21
Offer a consistent cold entrée at elementary schools.	$44,070	$89,475	$133,545	$133,545	$133,545

Management Issue 4-8

At SPS secondary schools, serving line configurations, single POS stations, crowded dining rooms, and the anticipation of long wait times discourage participation. Instead, students were observed bringing their own lunches at both middle and high schools, or, at high schools, going off campus for lunch.

In eight observations of secondary lunch, the average line wait time was 4.75 minutes, with a range from one to 13 minutes. While an average line wait of less than five minutes appears acceptable on the surface, it is so low because secondary participation is so low. **Exhibit 4-23** shows the average lunch participation for the first five months of 2015-16, calculated without and with a la carte sales. Only the World School met the HeathierUS School Challenge criteria published in 2014. Only the World School achieved the median

[3] Estimated blended rate of free, reduced, and full-pay revenues.

participation rate reported by districts in the Council of the Great City Schools (CGCS) for 2013-14.

Exhibit 4-23
All Secondary Lunch Participation Rates Compared to National Criteria and Council of the Great City Schools
2015-16 (SEP Through JAN)

School	Lunch Participation Meals Only	Lunch Participation Meals and A La Carte	Criteria Rate	CGCS Median Rate 2013-14
High				
Ballard	10%	12%	65%	63%
Cleveland	37%	38%	65%	63%
Franklin	27%	27%	65%	63%
Garfield	15%	16%	65%	63%
Hale	19%	20%	65%	63%
Ingraham	14%	15%	65%	63%
NOVA	19%	20%	65%	63%
Rainier Beach	28%	28%	65%	63%
Roosevelt	8%	9%	65%	63%
Sealth	40%	40%	65%	63%
Seattle World School	87%	87%	65%	63%
South Lake	19%	19%	65%	63%
West Seattle	14%	15%	65%	63%
Middle				
Aki Kurose	57%	62%	75%	63%
Denny	57%	57%	75%	63%
Eckstein	15%	17%	75%	63%
Hamilton	16%	17%	75%	63%
Jane Addams	26%	28%	75%	63%
Madison	33%	37%	75%	63%
McClure	29%	33%	75%	63%
Mercer	49%	50%	75%	63%
Washington	41%	46%	75%	63%
Whitman	21%	22%	75%	63%

Source: SPS, HeathierUS School Challenge criteria of 2014, and CGCS, with Prismatic calculations, March 2016

One common initial belief in districts with low lunch participation rates is that only students who can afford to eat elsewhere are doing so. However this is not the case in SPS. **Exhibit 4-24** shows the average lunch participation for the first five months of 2015-16, among students who qualify for free or reduced-price meals, in comparison to the 2013-14 data from the CGCS. On average, the CGCS districts had a median participation rate of 79 percent among lower income students. Only one SPS school surpassed that mark. Only three SPS schools exceeded the lower quartile mark. This indicates substantially worse performance than nearly all of the CGCS peers. Given that SPS high school students who qualify for free/reduced-price meals likely have little money available to purchase meals off campus, it would be reasonable to assume that many are not eating lunch at all.

Exhibit 4-24
Free/Reduced Secondary Lunch Participation Rates Compared to Council of the Great City Schools
2015-16 (SEP Through JAN)

School	Free and Reduced Lunch Participation Meals Only	CGCS Rates, 2013-14		
		Lower Quartile	Median	Upper Quartile
High				
Ballard	37%	68%	79%	84%
Cleveland	53%	68%	79%	84%
Franklin	36%	68%	79%	84%
Garfield	35%	68%	79%	84%
Hale	48%	68%	79%	84%
Ingraham	42%	68%	79%	84%
NOVA	36%	68%	79%	84%
Rainier Beach	37%	68%	79%	84%
Roosevelt	39%	68%	79%	84%
Sealth	56%	68%	79%	84%
Seattle World School	91%	68%	79%	84%
South Lake	23%	68%	79%	84%
West Seattle	34%	68%	79%	84%
Middle				
Aki Kurose	65%	68%	79%	84%
Denny	69%	68%	79%	84%
Eckstein	56%	68%	79%	84%
Hamilton	58%	68%	79%	84%
Jane Addams	62%	68%	79%	84%
Madison	65%	68%	79%	84%
McClure	66%	68%	79%	84%
Mercer	63%	68%	79%	84%
Washington	75%	68%	79%	84%
Whitman	55%	68%	79%	84%

Source: SPS and CGCS, with Prismatic calculations, March 2016

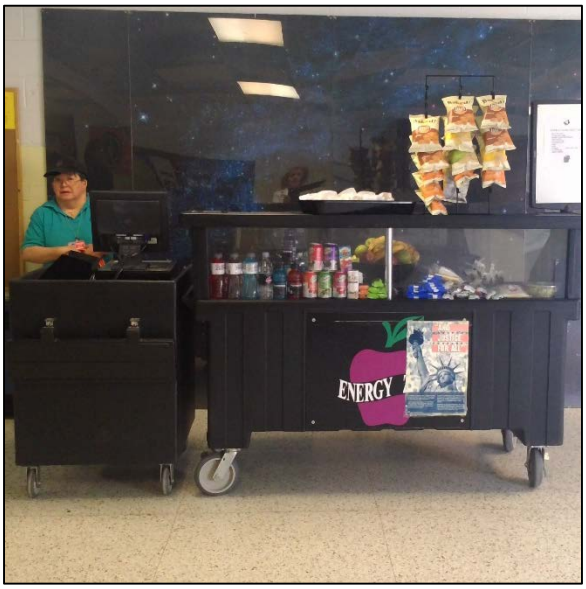
In none of the secondary cafeteria operations did the consulting team find concerted efforts to meet customers where they are, which may not be in the dining room. Use of grab and go carts (**Exhibits 4-25** and **4-26**) have been shown to increase meal access and participation. The mobile carts or kiosks can be used for both breakfast and lunch service, capturing customers at a variety of school locations such as hallways, entries and exits, and commons areas or student lounges.

Exhibit 4-25
Example Mobile Serving Cart



Source: www.beyondbreakfast.org

Exhibit 4-26
Example Mobile Serving Cart Near School Entrance



Source: Prismatic, from Fairfax County Public Schools, VA, 2014

Cincinnati Public Schools uses salad bar carts as kiosks for breakfast at their high schools, positioning them at entrance areas of the school so when students come in in the morning they can grab breakfast without going all the way down to the cafeteria. The salad bar/kiosks were obtained through grants from the Dairy Council and Fuel Up To Play 60. During lunch service, the equipment is used as a salad bar. This school year, a high school in Bismarck

Public Schools (ND) doubled breakfast participation solely by deploying a kiosk near where students typically enter the building each morning.[4]

Vending machines are available that dispense reimbursable meals. SPS has five vending machines that staff believes are capable of vending reimbursable meals, but none were in operation at the time of the site visit. NS staff noted various reasons the machines are not used:

- not enough time to load (staffing);
- slow dispersion of meals (milk separate);
- students felt it was faster to go through the line;
- problem finding meal containers that didn't open up while dispensed;
- issues with the machines not communicating with the point of service; and
- daily cleaning and replacement parts.

None of these problems are insurmountable. The consulting team only observed one at a school, Roosevelt High School, and it was not in use. Its placement, within the main meal serving area, was not optimal.

An example of a successful implementation, from the Poudre School District in Colorado, is shown in **Exhibit 4-27**. These vending machines are integrated into the point of sale (POS) computer system and dispense reimbursable meals. They can dispense both breakfast and lunch reimbursable meals. A student enters his/her pin number at the keypad and then selects items from the machine. The machine will not dispense any food product until at least three of the five lunch meal components have been selected (which is required for the meal to be considered reimbursable). The pin number of the student is locked out for a 20-minute period to preclude additional dispensing on that pin number. This machine has received significant approval among the students at the high school, as evidenced by a 16 percent increase in average daily participation. Student comments collected as part of an evaluation of vending machine initiative noted that they often preferred the sandwiches in the machine to other cafeteria choices and that they appreciated the lack of a wait time for the machine.

[4] http://bismarcktribune.com/news/local/education/mhs-breakfast-kiosk-grows-in-popularity/article_2a007bb7-0271-5004-9bb1-211f0fbc0413.html

Exhibit 4-27
Reimbursable Meal Vending Machine, Poudre Public Schools



Source: Prismatic file archives

Prismatic has reviewed other districts that have fielded similar reimbursable meal vending machines. These machines are typically well received and are particularly appropriate for cafeterias where meal period scheduling would otherwise result in long lines. They can effectively reduce line waits without significantly increasing labor requirements, as the machines can be stocked by a cashier before the serving period. In some districts, the vending machines are used to offer pre-packaged salads that are also reimbursable meals (**Exhibit 4-28**). Such an option could easily be prepared by the NS central kitchen and stocked by either the delivery drivers or cafeteria staff.

Exhibit 4-28
Reimbursable Vended Meal at a High School



Source: Prismatic file archives

Cincinnati Public Schools (OH) also uses reimbursable vending machines in the high schools for both breakfast and lunch. Before installing the vending machines their high school breakfast participation was around 16-17 percent; after the vending machines were installed participation averaged 29-30 percent. The Cincinnati vending machines (**Exhibit 4-29**) are stocked with meals prepared and packaged by the foodservices program. At the end of lunch each day they re-stock with breakfast for the next morning; after breakfast they stock for lunch.

Exhibit 4-29
Cincinnati High School Reimbursable Vending Machine



Source: www.beyondbreakfast.org

Management Recommendation

Expand serving options to include grab and go carts and reimbursable vending machines.

The consulting team recommends that every SPS high school have at least one grab and go cart operation and at least two reimbursable vending machines, strategically located in high student traffic areas. Middle schools should have at least two reimbursable vending machines, placed in the dining area. SPS should:

- review secondary school sites for grab and go cart opportunities;
- determine equipment needs, if any, and staffing options;
- develop a grab and go cart healthy option menu for breakfast and lunch with an eye to combining onsite preparation with central kitchen prepared items;
- determine grab and go equipment needs; bid carts and other component items as needed;
- redeploy the reimbursable school meal vending machines NS already owns, potentially relocating them to take advantage of higher traffic areas within the school;
- purchase additional reimbursable vending machines to fully equip all secondary schools;
- develop training for kitchen managers to stock the machines for both breakfast and lunch; and

- include training components on tracking student choices, inventory management and food safety.

Fiscal Impact

New grab and go carts cost between $3,000 and $6,500, with the higher end including the POS equipment. Reimbursable vending machines cost between $13,000 and $18,000. Grants have been obtained by other districts for the initial purchase of both items.

With 13 high schools and 10 middle schools, the consulting team recommends that the district deploy 13 grab and go carts and 46 reimbursable vending machines. If all must be purchased, the cost at most will be:

13 carts x $6,500 + 46 vending machines x $18,000 = $912,500

The availability of potential grants and the unknown number of vending machines already owned by the district likely reduces the maximum cost to $600,000. Data from other districts show a potential for doubling breakfast participation and increasing lunch participation. Doubling secondary breakfast participation and improving lunch participation by five percent would results in increased revenues of:

(2,567 daily breakfasts x 2 x $1.50 in revenue[5] + 5% x 5,726 daily lunches x $3.00 in revenue[6]) x 180 days = $1,540,782 annually

Management Recommendation	2016-17	2017-18	2018-19	2019-20	2020-21
Deploy grab and go carts and reimbursable vending machines in all secondary schools.	($600,000)	$1,540,782	$1,540,782	$1,540,782	$1,540,782

D. Issues in Procurement

The Institute of Child Nutrition's *Procurement in the 21st Century* defines procurement as a multi-step process for obtaining goods, products, and/or services at the best possible price. Proper planning before procuring a good or service is worthwhile and has a critical role in the district's ability to obtain the high-quality products and services needed at the lowest possible cost. Planning the procurement document for solicitation can be time-consuming; therefore, allocating the necessary time in the planning stage will enable the district to make more effective use of its resources and ensure the procurement is consistent with applicable laws. Adequate planning can also help to ensure competitive procurement. It may take up to one year to plan a well-developed solicitation.

Management Issue 4-9

Current lack of an inventory management system for the central kitchen and school sites has resulted in inaccurate usage data for forecasting; products being unavailable when needed; and district resources tied up in excess school inventories. As stated in the Institute of Child Nutrition's Inventory Management and

[5] Estimated blended rate of free, reduced, and full-pay revenues.
[6] Estimated blended rate of free, reduced, and full-pay revenues.

Tracking Reference, inventory management has long been considered a critical component of a well-managed school nutrition program. According to a United States Department of Agriculture (USDA) cost study, 46 percent of school nutrition program revenue is spent on food (USDA, 2008). Controlling this prime cost has been the focus of classic inventory management practices. More recently, food safety and security issues have added a need for traceability or the ability for schools to track food products back to their source and track forward to the consumption or disposal of the product.

Recalls of spinach, tomatoes, and peanuts have been in the headlines after hundreds of people became ill. Quick response to trace back to the source of contamination and trace forward to warn potential consumers is crucial for safeguarding public health. More recently, the number and frequency of food product recalls has required school districts to respond to these incidents by identifying recalled products and determining if they have been received by the districts, served, or are still in stock.

During recent years, food safety concerns have driven new initiatives that impact inventory control practices. Changes to National School Lunch Program (NSLP) regulations in 2004 required schools to implement food safety plans based on Hazard Analysis and Critical Control Points (HACCP). Traceability should be incorporated into standard operating procedures (SOPs) contained in food safety plans because both the source for food products implicated in foodborne illness and the ability to track the storage, production, and service of food products is critical in controlling the spread of illness.

The NS department is not adhering to best practices in inventory management and tracking at the central warehouse and the school sites. The central kitchen manager noted food items needed for specific menus are not always available in the warehouse, freezer or cooler when needed. This appears to be due to poor inventory management and forecasting using inaccurate data. This causes central kitchen staff to spend time locating the item(s) needed and buying off-bid at Cash and Carry or Costco.

The interim director indicated there are no par levels established for food, either in the warehouse and central kitchen or at the schools. She would like to establish par levels to help control inventory but it is overwhelming with limited staff. The district purchasing department has established par levels for the foodservice supplies it orders. Inventories used to be taken twice a year. She noted that par levels, establishing a true cycle menu, inventorying in the schools once a month and reducing inventory items would result in more efficient inventory management.

The central kitchen manager and a coordinator do weekly walkthrough's of the dry items in the kitchen and the walk-ins. The district warehouse orders and inventories the dry staple goods and frozen items. There is a warehouse inventory available but the central kitchen does not receive a copy.

Input from area supervisor interviews agreed that inventory management was lacking. The schools do not do a monthly inventory. Supervisors do not believe that kitchen staff checks their own storerooms and freezers before ordering. Over ordering has caused overstocking and ties up district resources.

The Institute of Child Nutrition (ICN) *Inventory Management and Tracking* training notes that effective inventory control begins long before products are purchased. Effective menu planning and recipe development is the first step in inventory management. Menu planning and recipe development should utilize a minimum of products while at the same time

provide enough variety to maximize customer satisfaction and good nutrition. Procuring, forecasting, ordering, and receiving ensure that the right foods in the correct quantities are received just in time for production. Storage practices keep food secure and minimize waste. Effective and efficient production and service practices ensure that customers consistently receive the foods they want safe, freshly prepared, and served in correct portions.

Traceability or the ability to track food items back to their original source may be a new concept for employees in school nutrition programs. It encompasses recording delivery dates, delivery agent information, quantity, product codes, and lot numbers for items received by the school, it also includes the disposition of the product such as served date or disposed of date, as a minimum best practice. The Applied Research Division at the University of Southern Mississippi (the research arm of the Institute of Child Nutrition (ICN), established the best practices for receiving and inventory management shown in **Exhibit 4-30**.

Exhibit 4-30
Best Practices in Nutrition Services Receiving and Inventory Management

Competency
• establishes operational procedures to effectively manage receiving and inventory systems
Essential Knowledge Statements
• knows fundamentals of effective receiving procedures • knows methods for effective inventory control • knows methods for effective implementation of a central warehouse system, when appropriate
Skill Statements
• develops delivery requirements that address product quality indicators (e.g., temperature upon delivery and receipt, packaging), time, and quantity • develops and communicates receiving procedures to ensure that products received match delivery requirements • develops and communicates procedures for returning and crediting unacceptable merchandise and ensuring that only authorized substitutions are accepted • develops procedures for inventory control that address the delivery date, storage, and turnover rate of food products and supplies • develops inventory procedures to keep operating costs at a realistic minimum • develops and updates systems for tracking inventory and use of USDA foods • ensures storage areas are temperature controlled, properly maintained, well ventilated, and adequately secured • creates an effective food and supply distribution system to all school nutrition sites, when appropriate

Source: ICN, Inventory Management and Tracking

The ICN Inventory Management and Tracking Reference Guide notes these best practices:

- **Batch Cooking:** Preparing smaller quantities of food as needed throughout the serving period rather than preparing the total quantity needed at one time;

- **Cycle Menu:** Menus that are repeated over a specified period of time;

- **Cycle Counts:** Physical count of a small group of randomly selected products on a periodic basis. Typically used in high volume operations when a monthly physical inventory may not be possible;
- **Indirect Discount:** Applying a discount for the fair market value of USDA Foods on processed products on the invoice; also referred to as "net off invoice";
- **Par Value:** The amount of product needed to fulfill menu requirements for one ordering period plus a small amount for safety stock;
- **Perpetual Inventory:** Continuous recording of all receipts and issues of products in storage providing a balance of each item at all times;
- **Physical Inventory:** Periodic actual count of products in storage areas;
- **Single Inventory Method:** Maintenance of a single inventory for food and supplies, including USDA Foods; and
- **Standard Operating Procedure (SOP):** Detailed written instructions for a process that must be followed to ensure a desired outcome.

The Institute of Child Nutrition's *Procurement in the 21st Century* also identifies optimizing Stock Keeping Units (SKUs) as a best practice. A SKU is a unique identifier for each unit of product. The SKU is often the product code number. Numerous menu items can be created with a single product, such as one type of chicken patty for chicken on a bun, chicken parmesan, and grilled chicken salad.

In many cases school districts burden themselves with too many different products or SKUs. For instance, each flavor of juice is a separate SKU with its own product code number. Too many SKUs equate to writing many different bid specifications and ensuring all items are properly received and inventoried. Reducing the number of SKUs is a best practice.

In her book, *Controlling Costs in the Food Service Industry*, Pannell-Martin notes that using a "par stock level system" means maintaining an optimal level of some items in inventory. The minimum, maximum, and optimal inventory quantities are set for high-use items. The minimum quantity is maintained in stock at all times and a maximum level is not exceeded. The maximum inventory levels should be set carefully so the amount of money tied up in inventory is kept low. Good records on usage is a critical tool in setting the reorder point.

Par stock levels – minimum, maximum, optimal quantities and the reorder point should be established considering these factors:

- quantity used;
- frequency of deliveries;
- unit of purchase;
- quantity pricing by the vendor;
- shelf life of product;
- cash flow; and

- differences in seasonal usage.

The advantages to establishing a par stock level are that the forecasting/ordering processes become much simpler and accurate. The process is easily computerized and requires little decision-making once the levels of stock have been established.

Management Recommendation

Develop and maintain an inventory management and tracking system for the central kitchen and school sites.

To do this, NS should:

- Develop a written inventory management plan for the central kitchen and school sites that includes taking monthly inventories in order to develop accurate usage for ordering and bidding purposes.

- Take accurate inventories of food and supplies in all areas of the central kitchen and at each school site at the end of this school year. Staff should review expiration dates of all food items to assure out-of-date items do not remain in stock for use. The inventory data should provide the initial quantities for school orders.

- Establish par levels for food and supply items and add to central kitchen and school site order forms to assist managers in ordering. Area supervisors should train kitchen managers on inventory control and cost management.

Fiscal Impact

Once the NS is fully staffed, this recommendation can be implemented with existing resources.

5 Equipment

This chapter addresses the equipment of the Nutrition Services (NS) department of Seattle Public Schools (SPS). Nutrition services directors are faced with unique challenges and opportunities when making equipment and facility design decisions for their school nutrition programs, many of which focus on the specific goals of the programs and the experiences of the directors. According to Pannell-Martin (2014), in many school districts large equipment has not been replaced as it should have been, which is before it died. Pannell-Martin adds:

> *Much of the equipment in schools today was purchased during the 1960s, when the number of schools being built was at a peak and when federal monies were available for equipment. Much of the equipment bought in the 1960s that had a "life" of 25 to 30 years has worn out, is outdated, and labor-intense equipment, and needs to be replaced.*[1]

Large equipment specifications and purchases should be based on the following:

- the menu and number of meals served;
- skills of the personnel;
- location of the kitchen;
- safety;
- health and sanitary standards;
- equipment and installation costs and utilities;
- available space;
- maintenance service available within a reasonable distance;
- ease in operating; and
- money available.

When determining equipment capacities, the requirements, the menu items, and quantities to be processed should be considered. For example, what is the maximum number of pans that can be put in the ovens at one time?

Equipment is generally purchased for one or more of the following reasons:

- to improve sanitation;
- to reduce labor costs;
- to maintain the nutritional value of foods;

[1] Pannell-Martin, D. & Boettger, J.A. (2014). *School Food and Nutrition Management of the 21st Century*. SFS21

- to lower food costs;
- to add appeal and variety to menus;
- to increase productivity to make the work easier; and
- to replace ineffective, malfunctioning, high maintenance cost equipment.

Thematic issues related to equipment identified by the ICN include:

- ***The menu drives everything*** *in the school nutrition operation, especially in equipment and facility design decisions. Students' food preferences are constantly changing and are certainly more sophisticated than ever before.*
- ***Nutrition and wellness*** *considerations influence all menu choices. The menu is not just based on popular food choices for students.*
- ***Food safety*** *and nutrition are equally important to the health of students.*
- ***Safety*** *of the environment for both school nutrition staff and students influences equipment choices, as well as layout and design of the kitchen and cafeteria/dining areas.*
- ***Security*** *issues have grown in importance and are vital when making decisions for equipment and facility design.*
- ***Budget/finance issues*** *may limit the vision for the ideal school nutrition operation. Even so, the goal of the director is to optimize options while still being fiscally responsible.*
- ***Regulations, policies, and requirements*** *exist at federal, state, and local levels. School nutrition directors must be aware of these and rigidly adhere to them when making equipment purchases and facility design decisions.*
- ***Critical path planning*** *and scheduling require foresight and the ability to see the "big" picture, no matter the focus of the project.*
- *School nutrition directors should* ***plan with the future in mind.*** *Creative thinking and decision making skills are vital to lengthening the life expectancy of the facility. School nutrition directors will make decisions about whether the school nutrition program's needs are best served with a single piece of equipment, a kitchen renovation, or perhaps a completely new facility.*
- *The* ***needs of the school nutrition program also change.*** *As with other issues faced in a school nutrition program, the only certainty is change itself.*

The ICN has created a checklist to help directors determine equipment needs. **Exhibit 5-1** shows a selection of the equipment recommendations based on the number of lunches served per day. When preparing large quantities of sliced foods, schools should consider purchasing an automatic food slicer. Tables for food preparation should be stainless steel and movable, with shelves and drawers being optional.

Exhibit 5-1
Food Preparation Equipment Checklist

Mixers – batter, beater, dough hook, and wire whip with attachments.*	Number of Lunches Served per Day						
	25-75	**76-150**	**151-250**	**251-500**	**501-750**	**751-1,000**	**1,001-1,250**
12 quarts with attachment #2	**1**						
20 quarts with attachments #1, #2, and #3		**1**	**1**			**1**	**1**
30 quarts with attachments #1, #2, and #3				***1**			
60 quarts with attachments #1, #2, and #3					**1**	**1**	**1**
or 2 ½ quarts food processor with attachments	**1**	**1**					

**Mixer Attachments: #1 high-speed drive, #2 vegetable slicer 5/16" shredding plates and grater, #3 bowl truck.*

VCM – continuous feed	Number of Lunches Served per Day						
	25-75	**76-150**	**151-250**	**251-500**	**501-750**	**751-1,000**	**1,001-1,250**
2 ½ quarts			**1**	**1**			
6 quarts					**1**		
40 quarts					**1**	**1**	**1**

Food Cutters (not required if a school has a VCM or a mixer with the necessary attachments)	Number of Lunches Served per Day						
	25-75	**76-150**	**151-250**	**251-500**	**501-750**	**751-1,000**	**1,001-1,250**
Table Model					**1**	**1**	**1**

Food Slicers	Number of Lunches Served per Day						
	25-75	**76-150**	**151-250**	**251-500**	**501-750**	**751-1,000**	**1,001-1,250**
Electric – manually operated	**1**	**1**	**1**	**1**	**1**		
Electric - automatic		**1**	**1**	**1**	**1**	**1**	**1**

Tables for Food Preparation	Number of Lunches Served per Day						
	25-75	**76-150**	**151-250**	**251-500**	**501-750**	**751-1,000**	**1,001-1,250**
Baker's				**1 6-ft.**	**1 6-8 ft.**	**1 6-8 ft.**	**1 8-ft.**
Cook's	**1 6-ft.**	**1 6-ft.**	**1 6-ft.**	**1 8-ft.**	**1 8-ft.**	**1 8-ft.**	**1 8-ft.**
Work			**1 6-ft.**	**1 6-8 ft.**	***1 6-8 ft.**	**1 6-8 ft.**	**1 6-8 ft.**

Source: ICN Equipment Purchasing and Facility Design for School Nutrition Programs, 2011

Management Issue 5-1

The district lacks an equipment replacement plan. Outdated, inoperable, and inadequate equipment is negatively impacting production and productivity.

In school observations, the consulting team found old equipment that is in need of repair or surplus discard. Of the 33 sites visited, the consulting team found 10 kitchens that did not have adequate equipment to prepare quality meals or provide for efficient meal service. Thornton Creek Elementary and Ingram High School had equipment originally installed in the 1950s. At Wedgewood Elementary, the dishwasher was not working so staff had to hand wash the baskets used for meal service. At South Lake Alternative High School, the retherm oven was not working properly, so food was not ready at meal time. The first group of students to eat did not get the menu entrée item on the day of the onsite visit.

The NS central kitchen is also negatively impacted by equipment failures. During onsite visits, central kitchen staff was struggling to bake cinnamon buns because the proofing cabinets would not maintain proper temperature. The staff was shuffling racks of buns to achieve proper rising of the dough. There were three proofing units to one oven so space was not adequate for the amount of bread ready for final baking. Two other key central kitchen equipment pieces were inoperable due to metal fabrication needs:

- At a recent site visit by state regulatory staff, the cookie machine was determined to need a metal cover over working parts for user protection.
- The diner roll machine needs a guard rail placed in front of an unsafe area.

Until these accommodations are made, both machines are unavailable for central kitchen use.

In focus groups and interviews with cafeteria staff, the current lack of quality dinner rolls was used as an example of how equipment issues have negatively impacted the program. This spring, central kitchen staff may not be able to provide the cookies that have been popular in the past.

Some specific examples of broken or non-functioning equipment are shown in **Exhibit 5-2**.

Exhibit 5-2
Examples of Broken or Non-functioning Equipment

Old Oven Being Used for Hot Holding at Lowell Elementary



Broken Door Brace on Steamer at Ranier Beach High



Proofing Cabinet at Central Kitchen



Make-Shift Serving Line at Kimball Elementary



Source: Prismatic, March 2016

When money is available to replace or purchase a new piece of equipment, it is important for the nutrition services director to look at what is new, and try to upgrade and use technology where available. The cook's advice may be, "Just like what I have". Hopefully, the director will not take that advice, but will evaluate all available options. For instance, the combi-oven, which is a combination steamer and oven is not exactly new, but is being more accepted today than when it first appeared in this country. The versatility of the combi-oven is its strongest feature.

It can defrost, warm, cook, roast, bake, steam, and braise; however, it requires a large amount of kitchen space and is expensive.

The Institute of Child Nutrition (ICN) created a resource to help directors in the decision making process for equipment purchase. The introductory section provides an idea of the scope of the document:

> *Purchasing foodservice equipment and/or planning new and renovated school nutrition facilities can be one of the most challenging projects school nutrition directors undertake in their career. Success with these projects can be achieved by school nutrition directors providing the leadership to make informed decisions. Communication with other professionals involved in the process is vital to convey a profile of the school nutrition program and the goals of the project. In doing so, the information will aid in achieving a functioning design that is financially and operationally efficient in supporting program goals, both present and future.*

The ICN recommends one percent of the annual budget be designated for equipment purchases.

Management Recommendation

Budget one percent annually for equipment replacement and for new equipment as needed.

SPS should agree to set aside a portion of NS revenues that exceed expenditures each year for equipment purchase and replacement. Once equipment in need of replacement is identified, the district should write specifications and request bids for replacement equipment. Each year, the district should evaluate equipment, update the replacement plan, and continue allocating one percent of the child nutrition budget for equipment replacement.

Fiscal Impact

This recommendation is using an estimated NS annual budget of $13.5 million.

Management Recommendation	2016-17	2017-18	2018-19	2019-20	2020-21
Budget 1% annually for equipment replacement and for new equipment as needed.	($135,000)	($135,000)	($135,000)	($135,000)	($135,000)

Management Issue 5-2

The district lacks equipment and supplies to maintain temperatures on the serving line. Staff has difficulty keeping hot foods hot and cold foods cold throughout the serving period. Compounding this problem, serving areas are not configured to support healthy eating choices.

In several schools visited, the consulting team observed serving lines without the equipment necessary to keep hot foods hot and cold foods cold. Some cafeteria staff covered pre-pack entrees with towels on the serving line in an attempt to keep warmth in. Condiment stations

were not standardized, were often unattractive, and lacked the capacity to keep items cold. In several cases, it appeared that food safety might be in question.

In response to the lack of appropriate serving line equipment, one of the area supervisors worked with the health department to develop a Time as Control procedure. Essentially, the cafeteria has to throw out food that has been on the unheated serving line past a certain point. While an acceptable adaptation to the current situation, it contributes to food waste and unnecessary cost. There are serving line alternatives that would allow the reserving of food at a later point.

Exhibit 5-3 shows a selection of serving lines in the SPS schools. As shown, many are barebones and cannot be made attractive to standards observed in other school districts, not with the equipment and supplies currently available to cafeteria staff.

Exhibit 5-3
Examples of SPS Serving Lines



Source: Prismatic, March 2016

The consulting team observed only a few efforts to promote healthy choices by students. The salad bars were generally colorful, but some improvements are needed. These are detailed in Chapter 4 of this report. Beyond the salad bars, some schools used baskets to highlight attractive fruit options and one used a colorful cart to promote milk consumption (**Exhibit 5-4**). However, these efforts were not consistent and not all ideas currently promoted in school food services were in use.

Exhibit 5-4
Examples of SPS Promotions of Healthy Choices





Source: Prismatic, March 2016

Exhibit 5-5 shows a colorful and appealing serving line from another district. Director testimony indicates that serving lines like this, which cost approximately $25,000 per unit, pay for themselves in 18 months by increasing student participation. Menu items are not changed, but students are able to see all of the choices and perceived the food as being better quality. These types of lines are capable of keeping hot foods hot and cold foods cold, so items are served at an appropriate temperature and food waste is minimized.

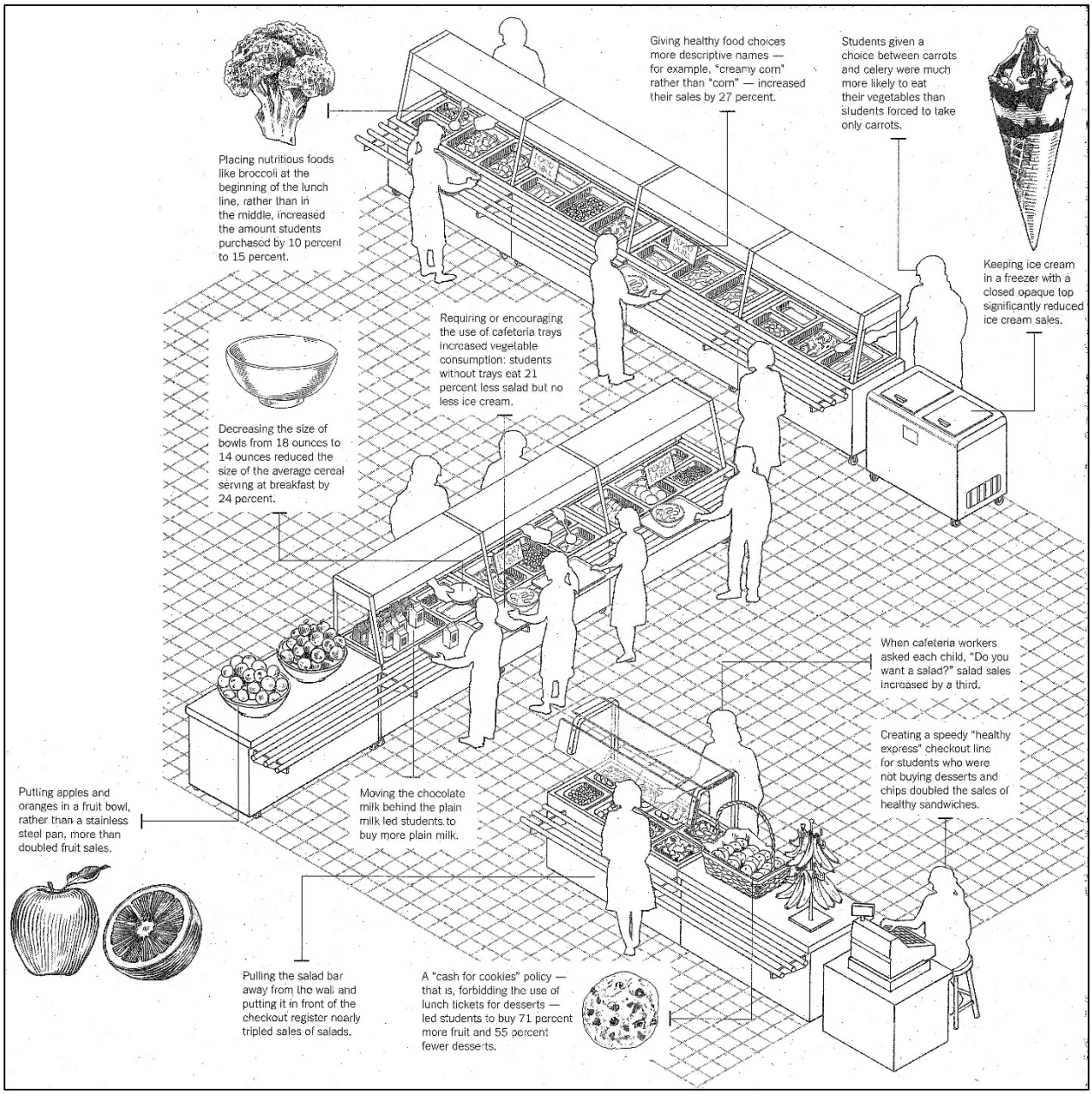
Exhibit 5-5
Sample Serving Line



Source: Prismatic file archives

Recent research from the Cornell Center for Behavioral Economics in Child Nutrition Program, funded by the USDA ERS/FNS has developed a number of proven methods for encouraging healthy eating. Termed the Smarter Lunch Room, **Exhibit 5-6** provides an overview of several ideas that promote healthy student eating habits. Many of these ideas are low cost or no-cost to implement.

Exhibit 5-6
Lunchroom Ideas from the Smarter Lunchrooms Movement



Source: www.smarterlunchrooms.org

Management Recommendation

Improve serving line equipment.

At a minimum, all SPS serving lines should have the proper equipment to keep hot foods hot. Beyond that, the district should implement attractive serving line ideas, as well as ones that promote healthy student eating.

The district should implement this recommendation over a period of three years. It should first ensure that all new construction/renovations includes acceptable serving line equipment. Then, the NS department should develop a prioritized list of schools to receive serving line replacement, with those schools where the disparity between the free/reduced-price eligibility and actual free-reduced-price participation is the greatest at the top of the list.

Fiscal Impact

The exact fiscal impact will depend on the specific improvements implemented. The consulting team recommends that a minimum of $100,000 per year be allocated. The cost to equip new/renovated schools should be included in the original construction/renovation budget.

Management Recommendation	2016-17	2017-18	2018-19	2019-20	2020-21
Improve serving line equipment.	($100,000)	($100,000)	($100,000)	($100,000)	($100,000)

Management Issue 5-3

Although NS maintains an inventory of equipment in the schools, it could be improved. Data provided to the consulting team indicates equipment condition is not maintained accurately.

The district's inventory list, maintained in an Excel spreadsheet, includes these fields:

- tag number;
- inventory date;
- status;
- site name;
- manufacturer;
- model number;
- serial number;
- condition;
- description;
- received date; and
- notes.

Exhibit 5-7 shows equipment with a received date of over 50 years old marked as in Excellent, Good, or New condition. Obviously, this condition status is not being updated. The district has 133 pieces of equipment older than 50 years. Most kitchen equipment manufacturers advocate as a 10-year life expectancy, specifically for any equipment that uses water, gas, or electricity.

Exhibit 5-7
Recorded Condition of Equipment Received Over 50 Years Ago

	Recorded Condition			
Equipment Description	**Excellent**	**Good**	**New**	**Total**
Cart Food Warming			1	1
Cart Steam Warmer			6	6
Cart Steaming Table	1			1
Cooler Beverage	1	9	1	11
Dispenser Milk			2	2
Freezer		2		4
Grease/Fat Filter		1		1
Griddle	1	2		3
Kitchen Cutter		1		1
Milk Shake Maker		1		1
Mixer Commercial		1		1
Mixer Hvy Duty		2		2
Oven Baking		1		1
Oven Convection		8	8	23
Oven Microwave	1	1	1	3
Oven Warmer	5	10	4	19
Oven Warming			1	1
Popcorn Popper Industrial	1	1		2
Refrigerator Chest		1		1
Refrigerator Lab-Type		1		1
Refrigerator Upright		14		14
Refrigerator, Compact		1		1
Salad Bars	8	1	7	16
Serving Table Hot Or Frig		1		1
Slicer Meat		3		3
Steam Table		1		1
Stove Flat Range W/Oven		3		3
Stove W/O Oven	2	4	2	8
Warmer Food		1		1
Total	**20**	**71**	**33**	**133**

Source: SPS and Prismatic calculations, April 2016

A comprehensive inventory of equipment condition and serviceability would improve the overall picture of the health of each kitchen with regards to its ability to conduct current or future expanded cooking operations. This is particularly true in SPS kitchens that have transitioned from cooking onsite to receiving bulk or pre-pack meals from the central kitchen. It appears that none of the equipment previously used for onsite cooking was removed after the production method changed. A condition inventory with accurate

condition status could yield equipment or replacement parts that would be useful elsewhere in the district.

Exhibit 5-8 provides a sample of output from a similar equipment inventory completed in another school district. That inventory resulted in a one-page sheet for each piece of equipment that included make, model, serial number, an equipment rating, and a comment on the condition and/or operational reliability of the equipment on a scale from one to five.

Exhibit 5-8
Sample Page from an Equipment Inventory



Source: Prismatic File Photo, March 2013

Management Recommendation

Develop a complete equipment inventory that includes condition status.

This inventory should be completed by area supervisors, in conjunction with the cafeteria manager at each school. Once established, maintaining a current status of the equipment should be part of ongoing NS operations. The information on condition and serviceability of kitchen equipment should be kept updated at least annually.

Fiscal Impact

This recommendation be can be implemented with existing resources; however, the consulting team recommends that one or more area supervisors be employed over the summer to complete this important task. As needed, kitchen managers could be paid for a day over the summer to discuss their specific equipment conditions.

Management Issue 5-4

The district does not maintain and repair kitchen equipment in a timely manner. As a result, staff has to make menu changes, determine work-around strategies, or use more labor hours to get the work done.

Of the 33 sites visited, the consulting team found that 13 kitchens had equipment in need of repair. In focus groups and conversations, cafeteria staff noted the inefficiency of the current work order reporting process, lack of communication between SPS maintenance staff and NS staff, and the need for repeated repairs to the same piece of equipment. There is an overall feeling of frustration in the department due to the need for timely and complete equipment repairs. According to NS staff, the department is not allowed to seek external assistance for kitchen equipment maintenance or repair.

Management Recommendation

Develop an alternative source for equipment maintenance and repair.

The district should either allow the NS department to seek external assistance in completing maintenance and repair work or provide a dedicated SPS maintenance position within the NS department. If the second option is selected, the position could also serve as a liaison between the maintenance and NS departments to improve communication and efficiency of tasks. Additional hours of assistance from the maintenance department would still be required because there are too many schools for one person to cover; however, having the position could bridge the gap between the two departments and restore a positive working relationship. If the maintenance department cannot fulfill the remaining requirements for repairs and preventive maintenance, the NS department should create a service contract with local vendors so that equipment is operational at all times.

Fiscal Impact

The fiscal impact of this recommendation depends on the specific option selected.

Management Issue 5-5

There are computerized systems in use in the NS department; however, they do not meet the needs of the program and they are not linked together to provide comprehensive data to decision makers in a timely manner. Currently, the department uses different software programs for point-of-sale, ordering, and inventory, free/reduced processing, and financial management. These are not all interfaced, and they are not all web-based to give real time information to the decision makers.

There are several major software vendors with systems that provide all of the modules needed to run a large district's food service operation. Components of a good overall system include:

Front of House	Back of House
Point of Sale	Inventory Management
Free & Reduced	Menu Planning
Online Services	Nutrient Analysis
Student Data Base Connector	Fixed Assets
	Accountability
	Financial & Statistical
	Time Clock

Most of these systems can be rolled out over a period of weeks or months so that training and implementation run smoothly and seamlessly.

Management Recommendation

Purchase one software program that is comprehensive and web-based so that real time data are available to school staff and central office staff for efficiency and analysis.

Currently, the district is updating the computer hardware at each school so there would be minimal additional costs for hardware. The consulting team has had good success with Meals Plus™ because it provides all of the modules listed above and has a track record for good customer service; however, there are others used in school foodservice programs across the country.

Competitively bid to gather as many responses as possible and carefully critique each one to ensure that a comprehensive product is selected. The ICN resource *Procurement for the 21st Century* has guidance to make this task easier.

In a testimonial from Durham Public Schools (NC) which serves 33 million meals annually, productivity was increased at every level when a comprehensive software system was installed. A Charleston, SC school system stated that 86 sites were installed in 60 days resulting in 95 percent less technical issues (help desk calls) and 100 percent match of school data to district data as a result.

The district has one position for technical support. Currently there are too many systems for one person to cover adequately while rolling out hardware and updating systems as needed. With a comprehensive software program and virtual network computing (VNC) capability, this position may be sufficient and only require minimal support of the SPS technology team.

Fiscal Impact

This recommendation is an estimate using the following guidelines: for estimating first year costs (software licenses, training) multiply $3,000 to $5,000 by the number of sites. It will vary based on how many components of the system are purchased and how much training is desired.

Additional hardware estimated prices:

- all in one touch pc (cashier computer) - $1,300
- basic numeric keypad - $199
- combination keypad/barcode reader - $349
- manual cash drawer - $249

To the extent that existing hardware can be made to work with a state-of-the-art software package, the cost of this recommendation would be reduced.

Management Recommendation	2016-17	2017-18	2018-19	2019-20	2020-21
Purchase a comprehensive and web-based software program.	($432,000)	($20,000)	($20,000)	($20,000)	($20,000)

Management Issue 5-6

In general, school cafeterias have inadequate line signage to encourage meal participation. This makes it difficult for students to know what is available from day to day.

The district has Nutrislice™ software for menus. The marketing component of this software is not being used to its fullest capacity. Many dining rooms have video technology that would allow the NS department to display state-of-the-art menu visuals to enhance participation and to provide needed nutrition education. **Exhibit 5-9** is an example of the menu boards at Hamilton Middle School that are not being used.

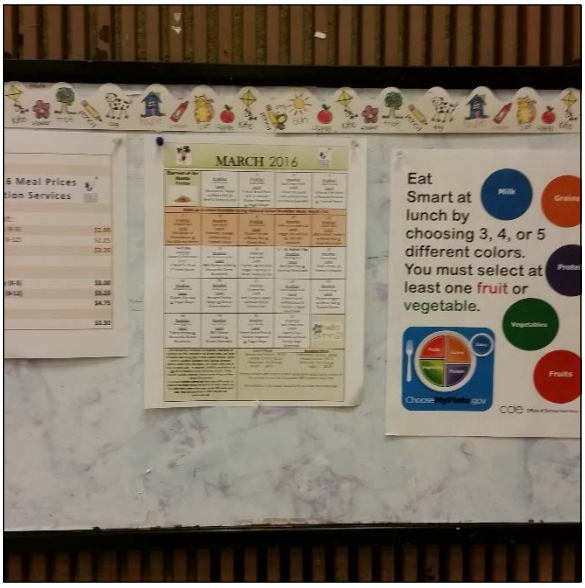
Exhibit 5-9
Unused Menu Boards at Serving Line Entrances at Hamilton Middle School



Source: Prismatic, March 2016

Instead of computerized menu boards, the primary method used in SPS to advertise the menu in the cafeteria consists of paper copies of the menu taped to the serving line door or a handwritten notice on a board (**Exhibit 5-10**). For younger students, the menus is often posted too high for them to be able to read. For all students, the printout is too small to easily read while moving through the serving line.

Exhibit 5-10
Example Menu Signage in SPS



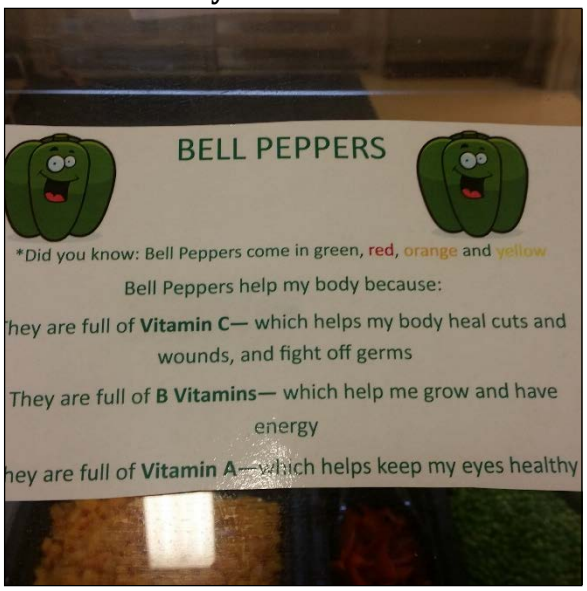


Source: Prismatic, March 2016

On the serving lines themselves, the consulting team saw signage placed above the height of younger students, as well as signage that incorrectly identified items. **Exhibit 5-11** provides examples of both problems.

Exhibit 5-11
Example Serving Line Signage in SPS

Salad Bar Signage Too High for Elementary Students to Read



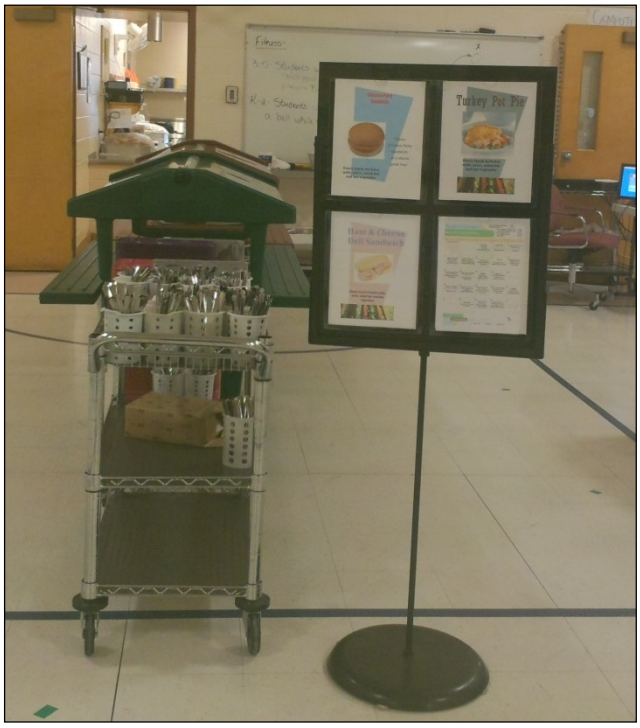
French Fries Identified as a Cheeseburger



Source: Prismatic, March 2016

In another district reviewed by the consulting team, each cafeteria provided signage related to just the day's offerings at the beginning of the line, as shown in **Exhibit 5-12**. The top right image in the photo is itself a photo of the Turkey Pot Pie available that day. In another district, cafeterias use standardized, colorful, pre-printed menu cards and special diet alerts on the serving line (**Exhibit 5-13**).

Exhibit 5-12
Sample Serving Menu/Line Signage



Source: Prismatic file archives

Exhibit 5-13
Examples of Serving Line Signage





Source: Prismatic file archives

Management Recommendation

Improve cafeteria menu and line signage.

The NS department should develop standard signage for each menu item. For those schools with video marketing capability already, the department should require its use to promote school meal items. For those schools without video marketing capability currently, the

department should develop, print, and distribute colorful marketing materials for each menu item and require their usage in the cafeteria and on the serving line.

Fiscal Impact

This recommendation can be implemented with existing resources. The consulting team recommends that one or more of the area supervisors be contracted over the summer to develop the signage materials.

Management Issue 5-7

The district lacks an ordering system for smallwares. This was identified as a problem among cafeteria managers. Smallwares include serving utensils, thermometers, timers, etc.

The consulting team observed a manager trying to check beef for doneness using a thermometer that may or may not have been accurate. There was no other thermometer in the kitchen to use as a backup. The ICN states "The use of the right small equipment can help make a better quality product, result in less worker fatigue, and gets the job done quickly and safely". Because of the importance to everyday tasks, good tools are essential in a good school nutrition program.

In general, all tools should be easy to use, durable, easily cleanable, accurate, and reasonable in cost. Sanitation codes should also be checked to see if there are limitations to the use of particular kinds of tools, such as wooden handles on knives or wooden cutting boards. State and local guidelines should be verified before equipment is purchased. In addition, many of these tools may need to be replaced periodically so price is a serious consideration as they represent an ongoing expense. The ICN provides tables that may be used as a checklist for assessing small equipment needs.

Management Recommendation

Create a process for managers to order smallwares from the central warehouse.

The NS department should determine annual needs of general smallware items and then release a line item request for bids so that the best possible prices can be received. Once bid items are awarded, the SPS warehouse can create par levels and maintain stock so that these essential items can be ordered by managers on a weekly basis as needed. The ICN's *Procurement for the 21st Century* resource has guidance for submitting such a line item bid.

Fiscal Impact

This recommendation can be implemented with existing resources. There may be a cost savings to the district if items are ordered in bulk through a competitive bid process, but the primary objective is to make appropriate smallwares readily available to cafeteria staff.